AUGUST 1952

PLEASE ROUTE THIS COPY TO	
Manager	Pressroom Foreman
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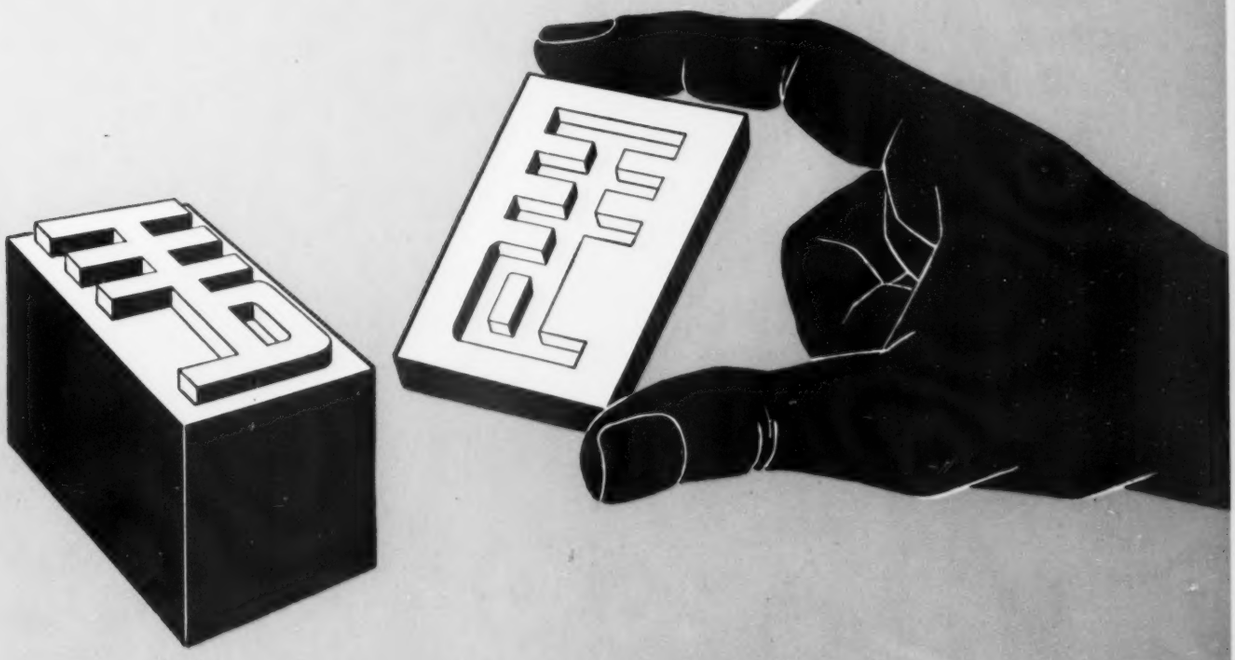
Plant Supt.	Mailing Foreman
Platemaking Foreman	Maintenance Supt.
Composing Foreman	Purchasing Agt.
For filing, please return to	

PRINTING EQUIPMENT *Engineer*

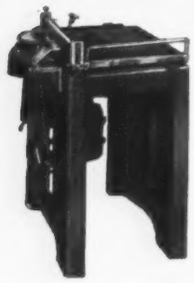


AN INDUSTRY-WIDE TECHNICAL PUBLICATION

FOR COMPOSING ROOM $AVING$

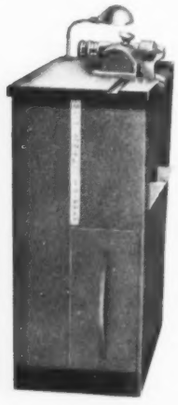
LOOK into the advantages of
MORRISON *Saw Trimmer and Allied Machines*

MORRISON PLATE BEVELER



Puts a perfect, burr-free shoulder or bevel on all plates. Cutters work from edge of plate, not the top. You get a smooth die-straight cut every time.

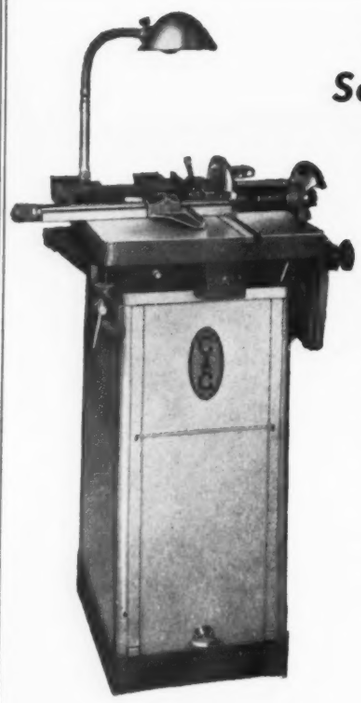
MORRISON SLUG STRIPPER



"Proves itself to the men, within 24 hours." Makes it easy to strip the face of any slug or type character to the exact thickness needed for base heights.

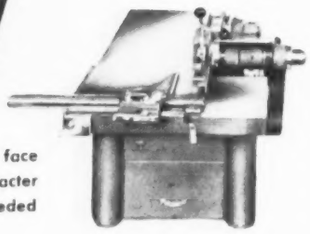
MORRISON

Model 3-A Saw Trimmer



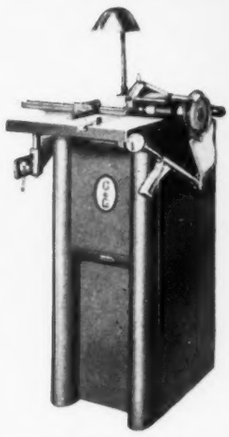
Today's more versatile saw, Table, 30" x 18". DeLuxe equipment includes: 73-Pica gauge and workholder. 135-Pica extension gauge, miter and lineup gauge, right and left-hand miter vise, saw grinder with dished emery wheel, trimmer grinder, universal saw blade assembly with head and trimmers. No 20 waste receptacle, adjustable lighting fixture, motor and pulley.

MORRISON MODEL "45" SPECIAL



A low-cost saw trimmer that embodies most of the features of the higher priced Model "45" and Model 3-A. "Behind the gauge" work clamp is standard, conventional "ahead of the gauge" clamp is optional equipment. Also available in a cabinet model.

MORRISON MODEL 45 SAW TRIMMER



With pistol grip saw blade attachment. Features "Trigger Speed" saw adjustment.

MORRISON ROUTER AND TYPE HIGH PLANER

Saves time in making corrections and changes, saves make ready time by having all cuts precision height. Has exclusive Morrison micrometer height gauge. Allows routing to center of a 34" cut.

Other Morrison Equipment includes: Strip material cabinets, waste receptacles, Universal saw blades, router bits, and jig saw blades

Symbol of Operating Economy

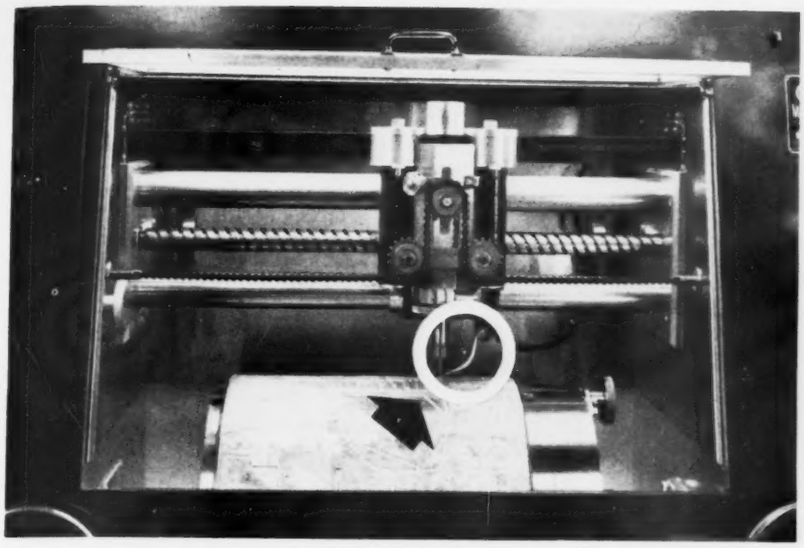
THE MORRISON COMPANY MILWAUKEE WIS.

THE *Morrison* COMPANY

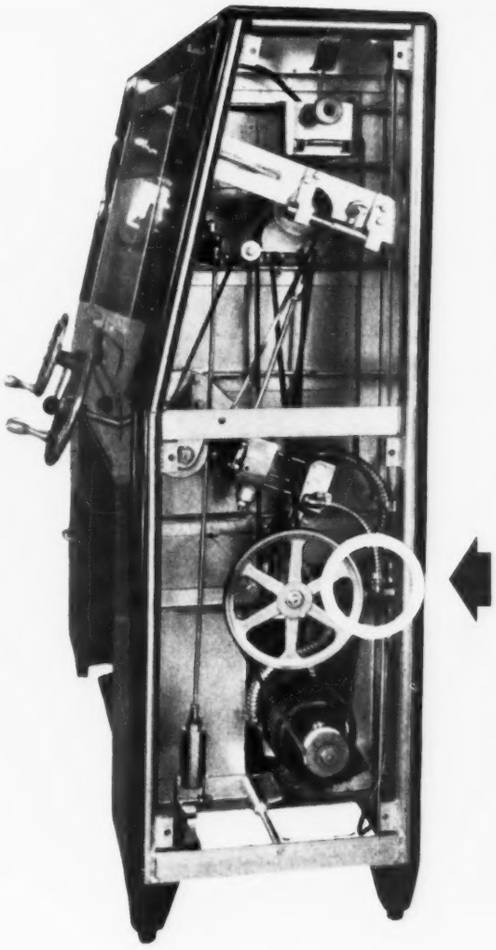
PRECISION MACHINES FOR THE GRAPHIC ARTS INDUSTRY

125 W. Melvina Street, Milwaukee 12, Wisconsin

NEW!...Air Jet Chip Remover for Sta-Hi Master Routers



AVAILABLE ON NEW MACHINES OR FOR MASTER ROUTERS NOW IN OPERATION



In keeping with Sta-Hi's policy of constantly improving equipment to further increase its operating efficiency, the new Air Jet Chip Remover has been developed and is now available as an attachment on STA-HI Master Routers.

This attachment operates from the customer's compressed air system and provides a constant blast of air to remove chips from the plate as fast as they are routed off. No chips can stick to the plate and pile up around the routing tool to obscure the operator's view of the work.

An adjustable solenoid valve is cut into the machine's electrical system so that the Air Jet is in operation only when the main drive motor on the machine is running. The required amount of air is thus automatically supplied only when it is actually needed.

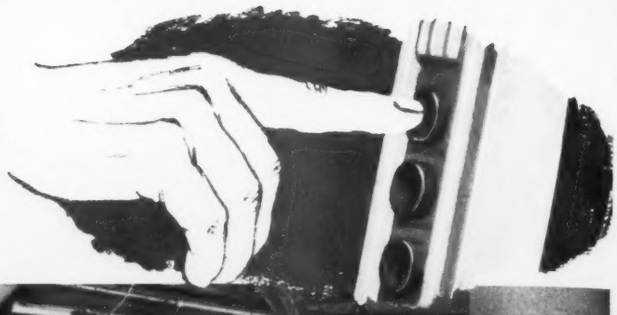
The photo above shows the Air Jet nozzle, mounted close to the router bit, and the flexible air supply line which does not interfere in any way with the normal operation of the machine. The photo at left shows the solenoid control and arrangement of the air supply lead-in and feeder lines.

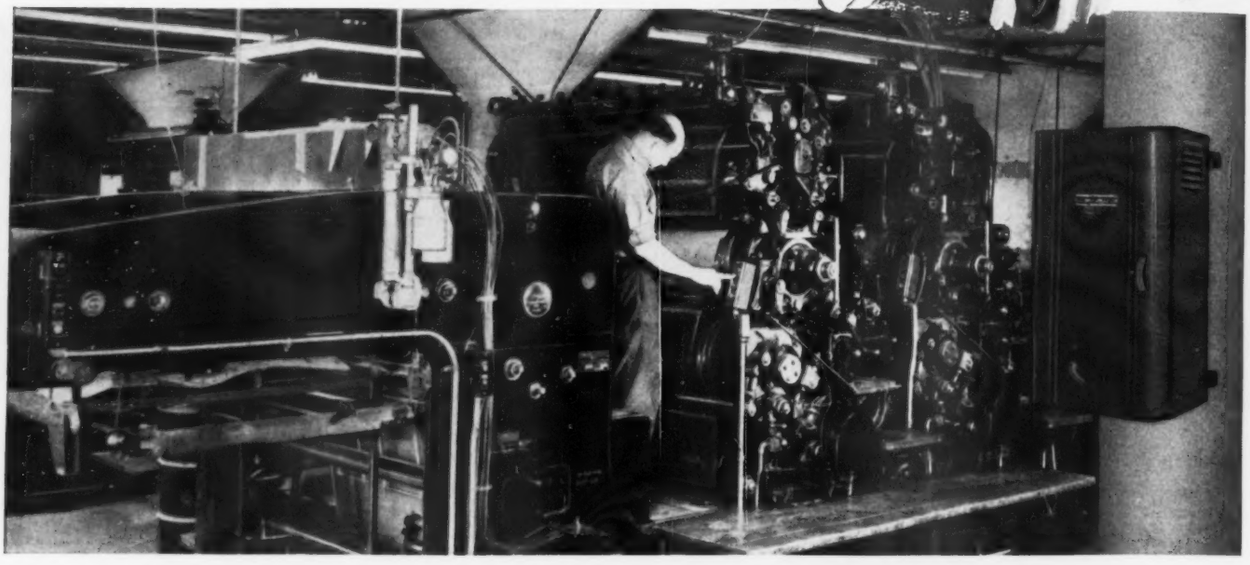
The Air Jet Chip Remover can be included in a new Master Router as optional equipment, or can be furnished as an attachment which can be easily and quickly installed on any Master Router now in operation—at low cost!

Sta-Hi Corporation

BOX 152, WHITTIER, CALIFORNIA

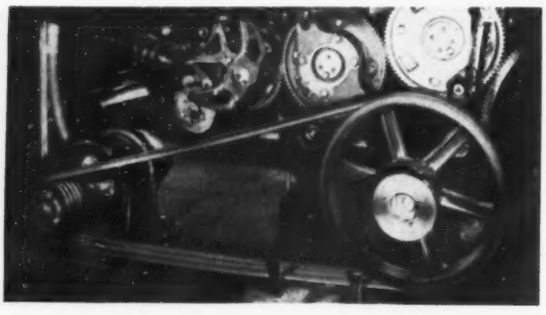
FINGER-TIP CONTROL OF PRESSES





2-color Offset Press in plant of
Chicago Offset Printing Company.

Shown is the Cline-Westinghouse Motor Belt Drive, the Push Button Station on the press and the Cline Universal Controller.



Cline-Westinghouse
DRIVE EQUIPMENT

The presses of the CHICAGO OFFSET PRINTING COMPANY provide excellent examples of "push-button" printing *at its best*. Equipped with Cline-Westinghouse Drives and Cline Universal Controllers, with push-button stations on the presses, the operators touch a button and the presses respond to their wishes . . . *instantly and unfailingly.*

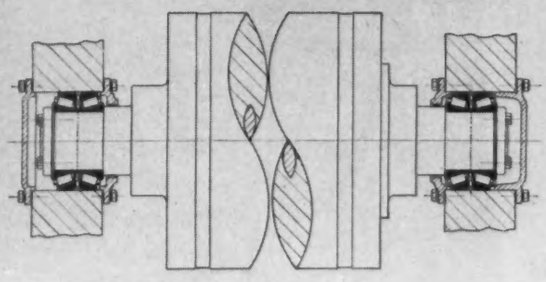
Starting or stopping, increasing or decreasing speed, inching along or reversing . . . the men who man the presses say that for complete, accurate control nothing equals Cline Equipment. They also know that Cline-Westinghouse Drives and Controls are rugged and dependable . . . simple to operate *without any complicated control circuits.*

Everything electrical needed in a modern printing plant . . . letterpress, offset, rotogravure or newspaper . . . is available from Cline. And back of it is over 40 years devoted to the origination, perfection and manufacture of electrical equipment for printing machinery.

Cline

ELECTRIC MANUFACTURING COMPANY
3405 WEST 47TH STREET, CHICAGO 32
San Francisco 8, California • New York 17, N. Y.

Press does complete job in one operation with help of TIMKEN® bearings



THE HAMILTON TOOL CO. mounts Timken tapered roller bearings on the offset and perforating rolls of its Rotary Web Press. Typical press roll application of Timken bearings is shown above.

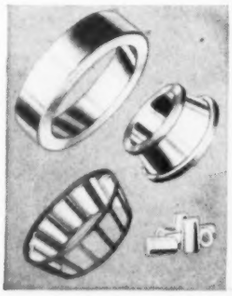
IT takes only one operation to do a complete job with this Hamilton Rotary Web Press. In addition to doing two-color offset printing on the face and one-color rubber plate printing on reverse, it also numbers, punches, cross perforates, slits and rewinds. To help insure accurate register and uniformly good impressions, precision Timken® tapered roller bearings are mounted on the offset and cut off cylinder. Timken bearings are also used on the cross-perforating cylinders.

Line contact between the rollers and races of Timken bearings gives them extra load-carrying capacity. Because of tapered construction, they take radial and thrust loads in any combination. Offset and perforating rolls are held in rigid alignment, maintaining precision. And since Timken bearings eliminate all speed restrictions due to bearings, more IPH are possible.

Closures are more effective because Timken bearings hold housings and shafts concentric. Lubricant is kept in, dirt and grit are kept out. Maintenance and lubrication time are minimized. Timken bearings normally last the life of the press because they're engineered for the job, precision manufactured, made of Timken fine alloy steel.

No other bearing gives you all the advantages you get with Timken tapered roller bearings. Be sure to specify them for all the printing equipment you build or buy. Always look for the trade-mark "Timken" on every bearing. The Timken Roller Bearing Company, Canton 6, Ohio. Canadian plant: St. Thomas, Ontario. Cable address: "TIMROSCO".

This symbol on a product means its bearings are the best.



DESIGN LEADERSHIP

The first Timken tapered roller bearing was produced in 1898. Since then the one-piece multiple perforated cage, wide area contact between roller ends and ribs, and every other important tapered roller bearing improvement have been introduced by The Timken Roller Bearing Company.

The Timken Company leads in: 1. advanced design; 2. precision manufacture; 3. rigid quality control; 4. special analysis steels.

TIMKEN

TRADE-MARK REG. U.S. PAT. OFF.

TAPERED ROLLER BEARINGS

NOT JUST A BALL ○ NOT JUST A ROLLER ⬭ THE TIMKEN TAPERED ROLLER ⬭ BEARING TAKES RADIAL ↓ AND THRUST →○← LOADS OR ANY COMBINATION →✳←

service . . .
experience . . .
skill . . .

SAM'L BINGHAM'S SON MFG. CO.

America's outstanding exclusive manufacturer of printers' rollers

WE ARE NOW MAKING
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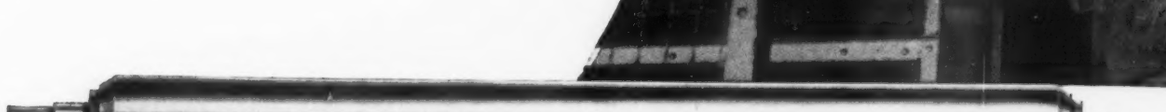
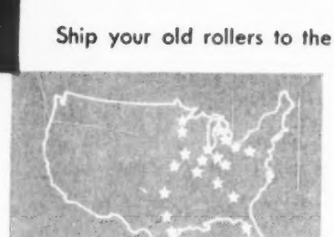
SUMMER USE
in our 19 Modern Factories at your service



SAM'L BINGHAM'S SON MFG. CO.
MANUFACTURERS OF
PRINTERS' ROLLERS
LITHO-OFFSET ROLLERS

Ship your old rollers to the factory most convenient to you



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MAKERS OF RUBBER • NON-MELTABLE • FABRIC-COVERED • ROTOGRAVURE • OFFSET • COMPOSITION • VARNISH-LACQUER • GRAINING **ROLLERS**

PRINTING EQUIPMENT *Engineer*

AN INDUSTRY-WIDE TECHNICAL PUBLICATION

Published especially for management, production and mechanical executives responsible for printing production and the specification of equipment and supplies used in the commercial, magazine, private plant and daily newspaper fields.

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COLOR...OF COURSE!

AND BETTER WITH THE GOSS HEADLINER

...CT REGISTER

Goss patented TENSION LOCK-UP assures *even impression* and *perfect register*, because it prevents any movement or buckling of plates. Another Goss PLUS feature! Reduces blanket wear, too.

EVEN TONE

Less variation of color at any press speed with the Goss CONTINUOUS INK FEED system. Advertisers get even tone of the color they select. An EXCLUSIVE Goss advantage. Goss COLORTROL — another *exclusive* — assures *instantaneous fingertip control* of ink distribution for every column of every page.

EASY TO USE

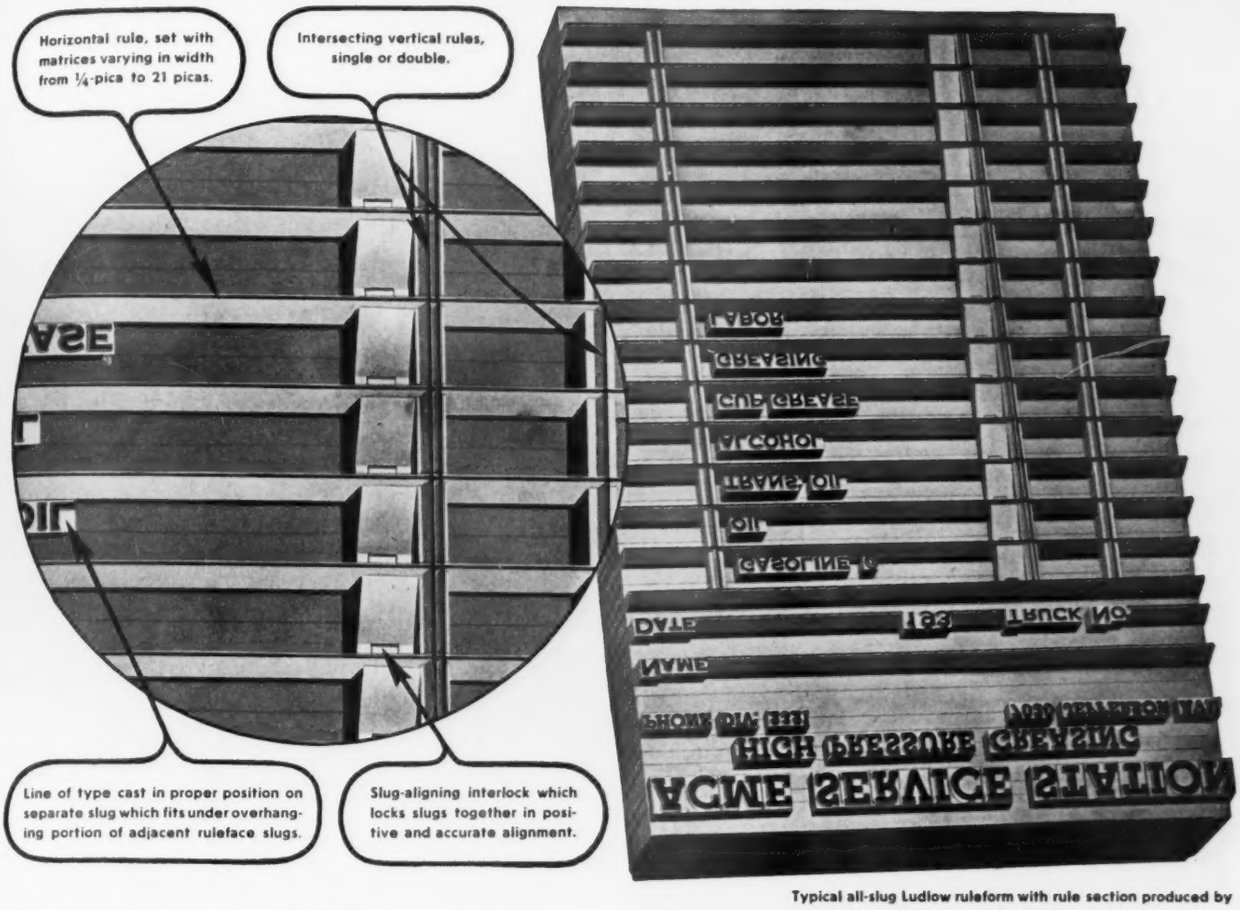
Goss Portable Color Fountains provide for color on any page or four different colors on the same plate cylinder — with a *minimum of adjustment*. Goss Portables can be attached to any printing couple without draining black ink, and *save time*.

...NOMICAL, TOO

The new Goss Color Deck fountains use the absolute minimum amount of ink — *only one and a half pounds* per page-section.

THE GOSS PRINTING PRESS CO.
1535 S. Paulina St., Chicago 8, Ill.
Goss Printing Press Co. Ltd., Preston, England

it's GOSS *again*


Horizontal rule, set with matrices varying in width from ¼-pica to 21 picas.
Intersecting vertical rules, single or double.
Line of type cast in proper position on separate slug which fits under overhanging portion of adjacent ruleface slugs.
Slug-aligning interlock which locks slugs together in positive and accurate alignment.

Typical all-slug Ludlow ruleform with rule section produced by repeat-casting from one setting of a line of ruleform matrices.

Extra Profits with Ludlow Ruleforms

THE LUDLOW way of handling ruleform composition makes the production of such forms both practical and profitable. Without cutting or fitting rules, or setting multiple-justification composition, the problems of fitting, joining and aligning rules and of inserting type lines are solved in a radically different yet simple way.

The Ludlow operator setting ruleforms is provided with precision horizontal rule matrices and matrix blocks of different set-widths, which join to cast the continuous cross-rules without visible breaks. He also has special precision "intersector" matrices, in which a section of vertical rule of the same height as the spacing between horizontal lines intersects a short length of horizontal rule. These intersector matrices, in which rulefaces are not driven but are cut in perfectly fitted inserts, are made with watchmaking precision and are an exclusive Ludlow feature.

In each horizontal line is included one "slug-aligning" matrix in which positioning stops are formed beneath the printing surface of the horizontal ruleface. This interlock insures positive and accurate alignment of every ruleslug with the other ruleslugs in the form. This patented feature is also exclusive with the Ludlow way of producing ruleform composition.

From a single setting of a line of these ruleform matrices, the operator repeat-casts as many slugs as may be needed to make up the rule portion of the form.

Box-headings or other typelines are cast in their proper position on full-length slugs and fit snugly under the overhanging portion of adjacent ruleface slugs without interfering with the alignment or fitting of the rules. A Ludlow ruleform makes up as a solid, all-slug, interlocking unit, with a perfection of alignment and rule-joining that will insure clean, sharp, quality printing.

With the obvious advantages of simplicity and speed of production, Ludlow ruleforms enable printers to earn extra profits in both composing room and pressroom. Precision-cast new Ludlow slug composition reduces make-ready time to the minimum. Multiple forms, easily repeat-cast in any quantity from a single setting of matrices, further shorten press running time and eliminate need for electrotypes. Forms may be held for future runs without tying up valuable material.

The Ludlow helps to solve ruleform problems, and at the same time enables printers to earn a handsome profit on commercial work because of its many operating advantages—of which ruleform composition is only one.

Write for a copy of "Ruleform Composition the Economical Ludlow Way," and for complete information regarding other Ludlow advantages.

Ludlow Typograph Company 2032 Clybourn Avenue, Chicago 14

Set in members of the Ludlow Tempo family

only MERCURY ROLLERS
give you this
5 star performance

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Can Any Publisher Afford an Obsolete Composing Room?

SCOTT Ideal Matrix Rolling Machines

The Scott Ideal Matrix Moulding Machine rolls any kind of matrix. The form is started under the upper cylinder by the application of a crossed belt drive which permits the cylinder to vary its surface speed between 1″ and 1¼″ without slippage. This drive allows the upper cylinder to find its own float without strain on the matrix. Powerful rolling mill effect and straight line pressure assures easy operation.

With the Scott free moulding cylinders all imperfections are eliminated, thus producing sharp, full depth rolled mats free from mechanical buckling.

Your inquiry regarding these Scott Ideal Matrix Machines is invited.

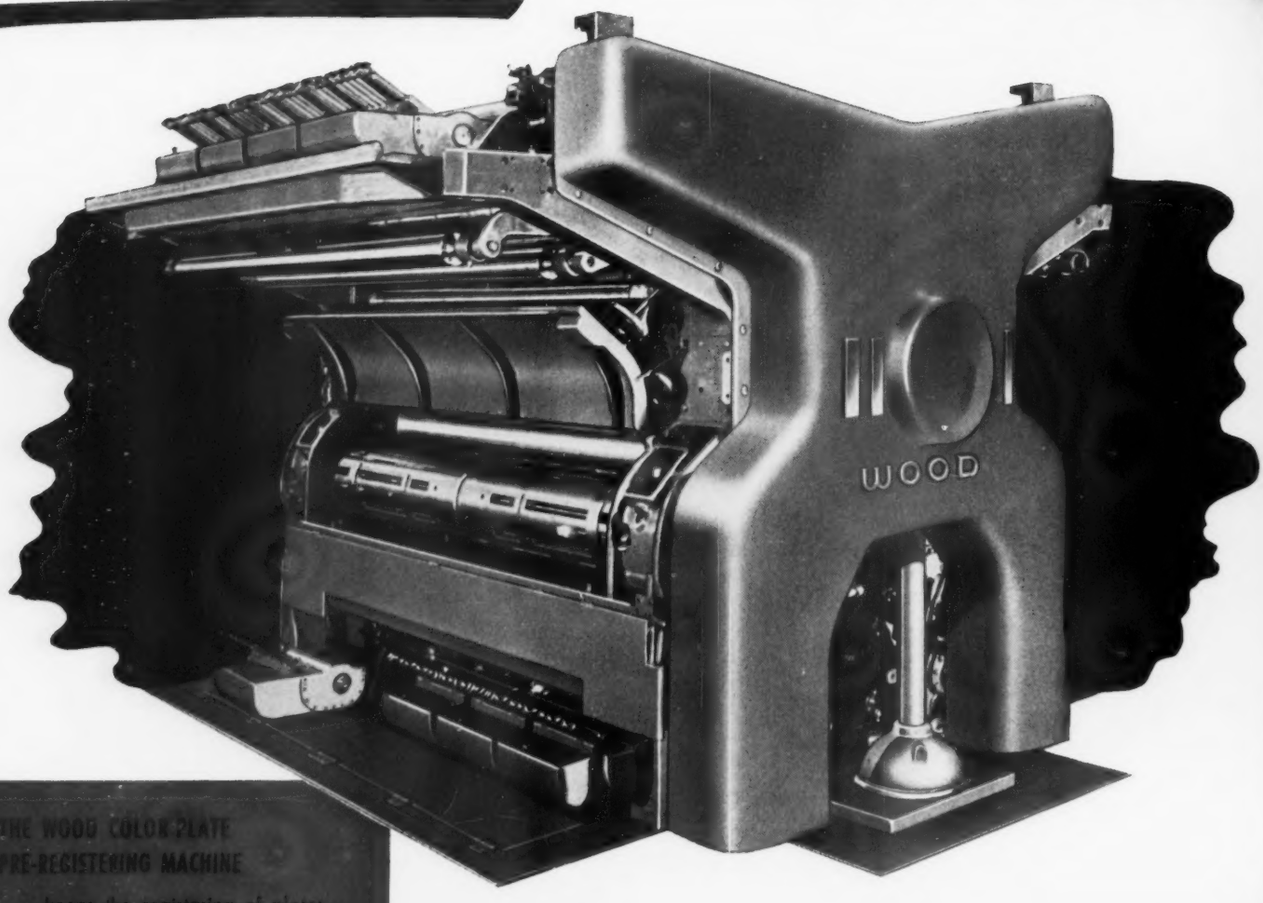
Buy with Confidence . . . Buy **SCOTT**

15-L-15

WALTER SCOTT & CO. INC.

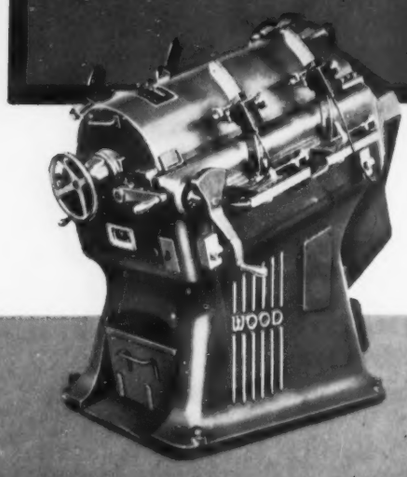
PLAINFIELD, NEW JERSEY

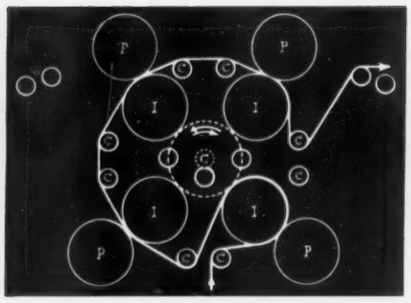
WOOD COLORU



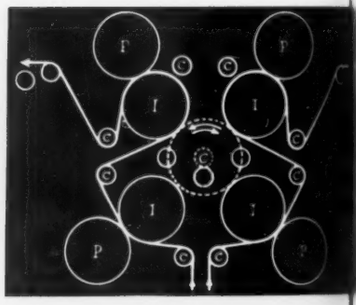
THE WOOD COLOR-PLATE PRE-REGISTERING MACHINE

. . . keeps the registering of plates in the Stereotype Department. The printing press is, therefore, free to perform its natural function . . . to produce papers. Thus the PRE-REGISTERING Machine proves to be an economical investment by making the printing press available for its normal function during the registering period.





Side elevation, press plated to print 3 colors one side, black on other. Either side of web can take first or second impression.



Press arranged to print two webs, 2 sides of sheet, each in black only.

IF IT'S Wood IT'S GOOD

WOOD NEWS

PLAINFIELD,

RUNITS

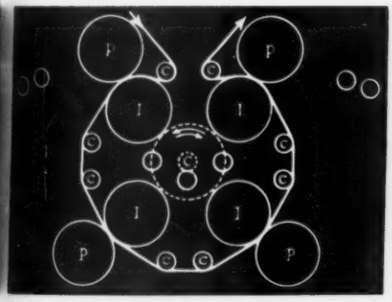
...ARE NOTED FOR HIGH PRODUCTION AND RELIABILITY!

For fast, reliable ROP color printing, nothing equals the WOOD 4-color unit for economical, accurate, high-speed production. These flexible 4-color units are proving their value day after day in the pressrooms of America's busiest newspapers.

Designed to operate in conjunction with black & white units, these fast, dependable color units run black with one or more colors simultaneously and provide complete flexibility for comic pages, supplements, special sections and ROP. Users consider them indispensible equipment in maintaining production schedules for regular editions.

If your pressroom problems involve the use of color, you will get better results from the WOOD color unit. Before you buy any equipment . . . look at WOOD! New techniques, tested methods and advanced engineering assure a better way to handle ROP color printing.

Send for illustrated literature and charts describing the many uses of the WOOD color unit.



Web arranged to receive four colors consecutively in short order. Any or all couples may be reversed at will, resulting in exceptional flexibility.

- Short leads minimize possibility of web-stretching and misregister.
- Color and black cylinders are controlled by single gear, lessening backlash and torsion, inherent in long drive shafts.
- Four individual readily accessible color fountains can be removed and replaced in a jiffy, facilitating washups and change of colors.
- Color units can be used also for black . . . need not stand idle when no color is running.
- Each individual couple is reversible, giving greater flexibility of color position.

SOME PROMINENT NEWSPAPER PLANTS USING WOOD PRESSES AND PRESSROOM EQUIPMENT

- New York Times
- St. Louis Post-Dispatch
- Cincinnati Times-Star
- St. Paul Dispatch and Pioneer Press
- Indianapolis Star and News
- Philadelphia Evening Bulletin
- Philadelphia Inquirer
- Boston Record
- Providence Journal and Bulletin
- Hartford Courant
- Newsday—Long Island
- Daytona Beach News-Journal
- Columbus Ohio Hilltop Record

MACHINERY CORPORATION

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Do You

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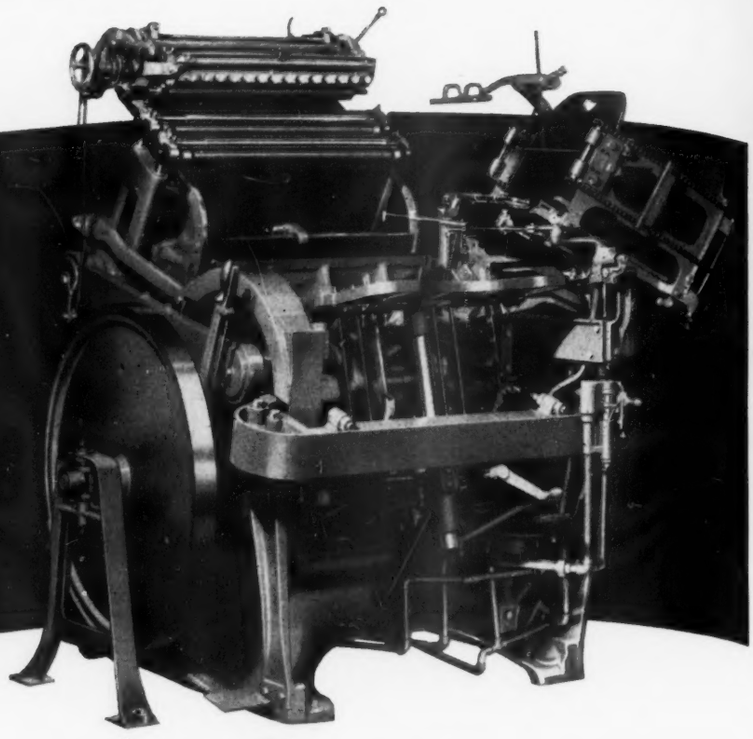
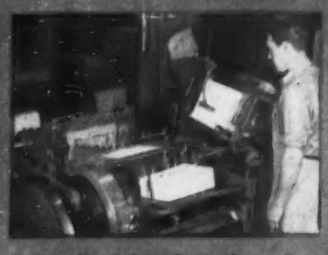
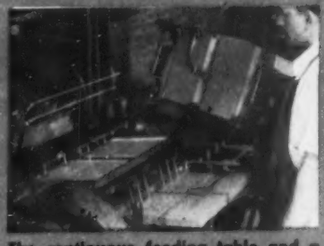
STAMP?
EMBOSS?





A Chandler & Price Super Heavy Duty Unit cutting and scoring photo-mount inserts.



The continuous feeding table and a two-up attachment on C&P Automatic Units make continuous operation of 3,000 to 4,000 per hour possible, even with very thick board.

Carton printing is fast and accurate. Depending upon size, several cartons can be printed at the same time.

Step *Up Front* in profitable, specialized operations with the

CHANDLER & PRICE SUPER HEAVY DUTY AUTOMATIC PRESS

● Truly automatic, including continuous feeding from hopper that permits loading while press is running (any stock from 13-lb. bond to heaviest cardboard, 3¼ x 5″ up to 15 13/16 x 23¼″). . .

Sufficient impression strength for printing the heaviest forms, and for scoring, creasing, embossing and die-cutting . . . rectangular, round, irregular shapes, greeting cards, photomounts, cartons, book cases, and covers . . .

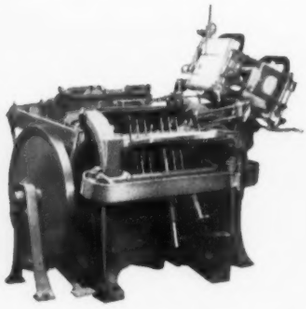
All operating controls (including ink fountain adjustments while press is running) reached from FRONT of press . . .

Printed sheet, form and platen in full view at all times—UP FRONT . . .

Delivery at FRONT, where pressman can easily check ink coverage or numbering machines (also makes slip-sheeting entirely practicable) . . .

Automatic throw-off of press if sheet fails to deliver . . .

These are a few of the features that make Chandler & Price Super Heavy Duty 14½″ x 22″ Craftsman Automatics superior products for specialty printing. Write for complete specifications.



Available Without Inking Mechanism

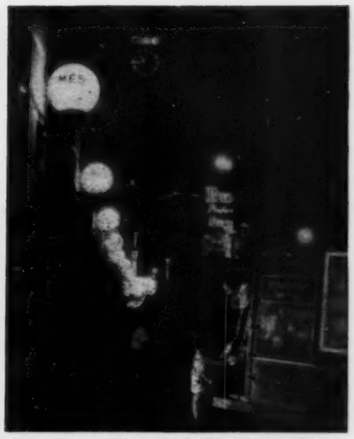
If used only for cutting, creasing, scoring and die-cutting, these presses can be furnished without inking mechanism.

THE CHANDLER & PRICE COMPANY
Cleveland 13, Ohio

★ *Built by American Workmen* ★

EVERYBODY READS THE COMICS—even the printers. HUBER NEWS tells how high-speed presses run off the comics.

PROOF STAGE for *Life in America*—prize-winning social history. HUBER NEWS shows how *Life in America* was printed; includes actual 32-page picture-and-text section on sports.



HOW THEY PRINT "All The News That's Fit To Print." HUBER NEWS tells how *The New York Times* is put to bed daily.

If your business involves **PRINTING**

you will want to read this...

What do you print? Magazines...newspapers...catalogs...comics. .packages...books? There are interesting, behind-the-scenes stories on all these in this special "Ink Issue" of HUBER NEWS—one of the largest house magazines ever published. There are 56 pages...more than 100 photographs and art reproductions...a 32-page section from the prize-winning book *Life in America*. Whether you are advertiser or agency—printer or publisher—you'll want to read HUBER NEWS. Write for your free copy today.

HUBER

J. M. HUBER CORPORATION
INK DIVISION
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Plants: Bayonne, New Jersey • Borger, Texas • Boston, Massachusetts
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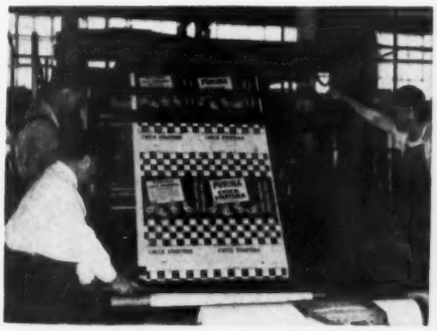
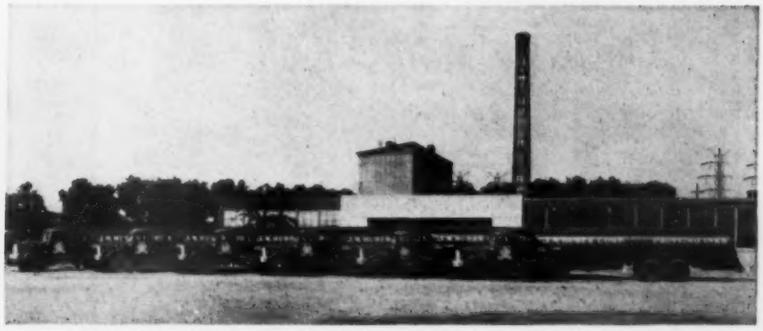
Sales Offices: Boston • Brooklyn • Chicago • New York • East St. Louis, Ill.

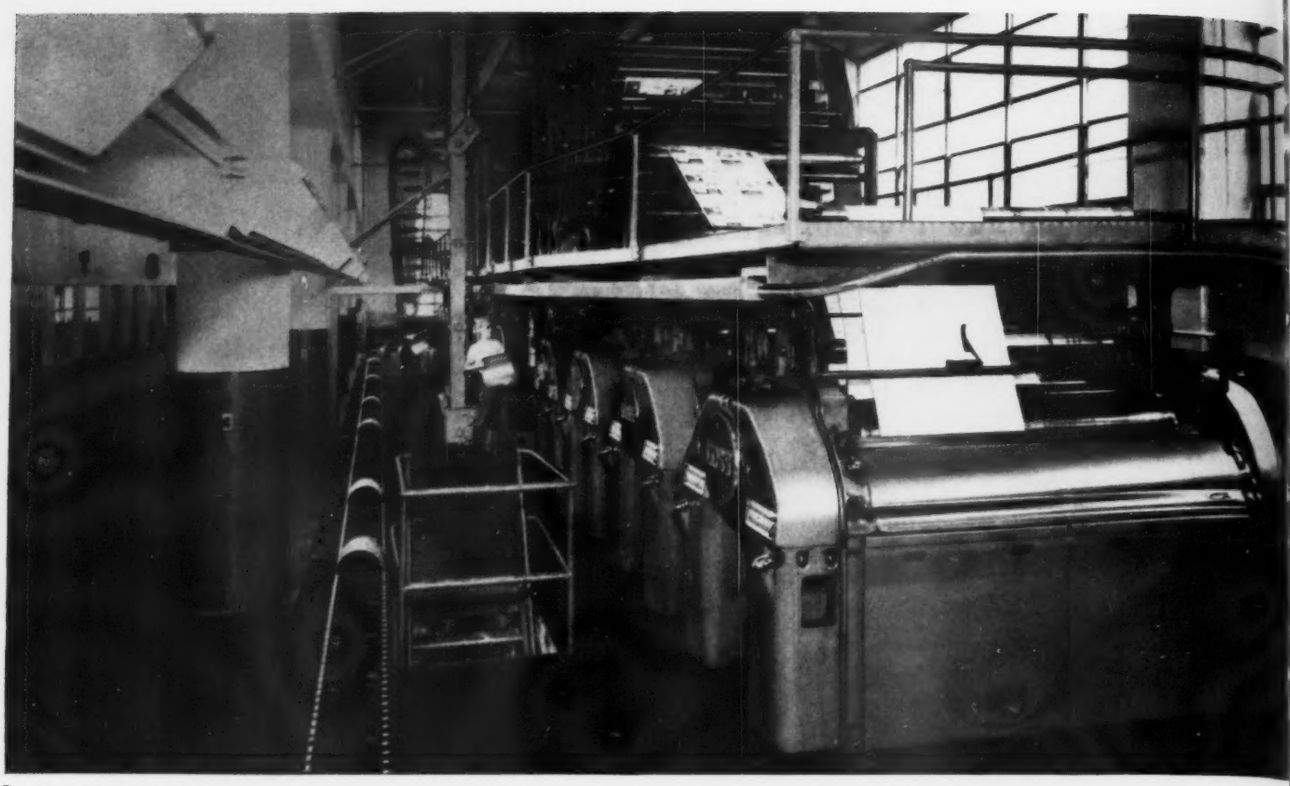
HUBER PRODUCTS IN USE SINCE 1780



NO CHICKEN FEED—Printing multi-wall feed bags is big business—but a little talked-of phase of printing. Write for free copy of HUBER NEWS.



THE WORLD'S LARGEST FLEET OF INK TRUCKS and how it operates, is described on page sixteen of the special "Ink Issue" of HUBER NEWS *(see offer above)*. Also featured in this issue are L. L. Bean's famous sportsman's catalog; and other interesting stories.

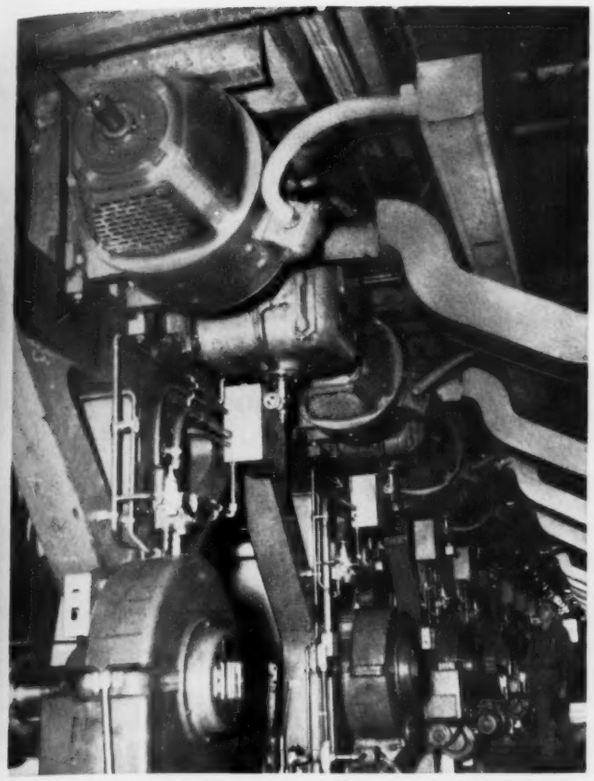


1. SMOOTH ACCELERATION of new Goss 12-unit, 2-folder Headliner—from threading to full speed—results with G-E drive because stepless speed adjustment eliminates jerky speed jumps, especially on take-off from threading speed.

New Banner, Tennessean press

4. G-E APPLICATION ENGINEERING fits all your electric equipment—like this substation powering the plant—into a **system** that meets your specific requirements.

5. MR. E. P. CHARLET, Sec'y and Treasurer (left), and Mr. G. F. McWorter, pressroom Supt., say pressmen like smooth acceleration and even stops of G-E drive.



2. DYNAMIC BRAKING of 14 coaxially-mounted 50-hp motors provides smooth braking, eliminates brake maintenance.

3. ADJUSTABLE-VOLTAGE RECTIFIERS provide stepless d-c voltage permitting drive to do work of threading motors.

starts smooth, brakes smooth

G-E Electronic Press Drive powers new Goss Headliner press, provides smooth acceleration and braking to reduce web breaks, cut maintenance

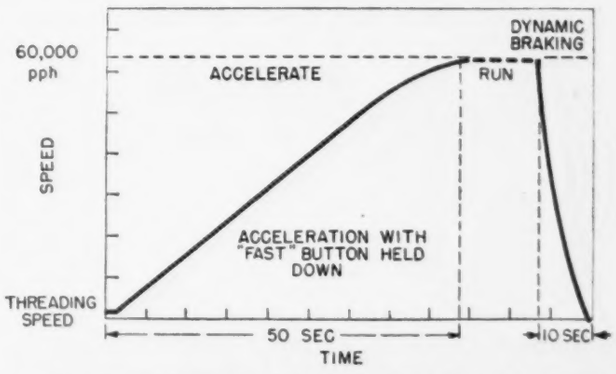
Mr. E. P. Charlet, Secretary and Treasurer of the Newspaper Printing Corp., publishers of the Nashville *Banner* and *Tennessean,* says of their new G-E Electronic Press Drive: "Our pressmen especially like the provision for smooth acceleration and braking which the G-E drive gives them. They tell me this has drastically reduced web breaks."

Your pressman simply holds down the "fast" button and your press climbs from threading- to full-speed smoothly and easily, reducing the possibility of web breaks.

Also, because dynamic braking is used to stop the press, there is no brake adjustment or maintenance.

These are just two of the many features of the G-E electronic press drive. For complete information, contact your nearest General Electric Apparatus Sales Office or write for bulletin GEA-5523 . . . today! *General Electric Company, Schenectady 5, New York.*

653-21

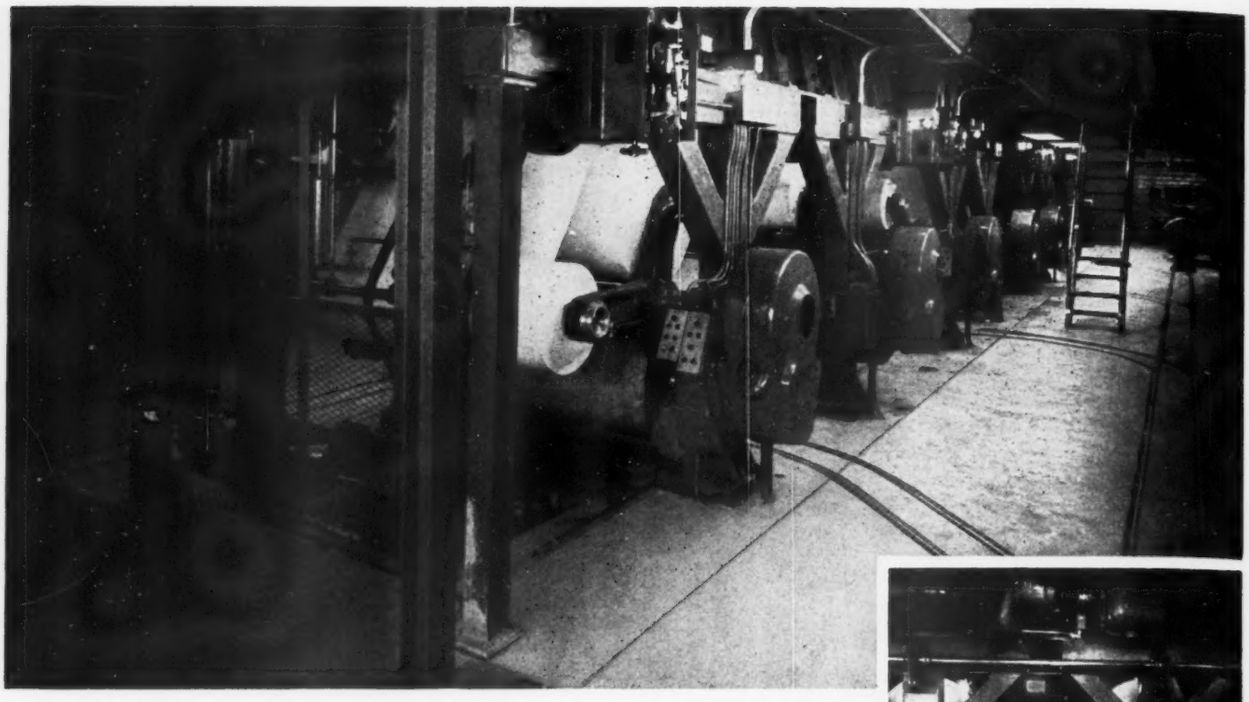


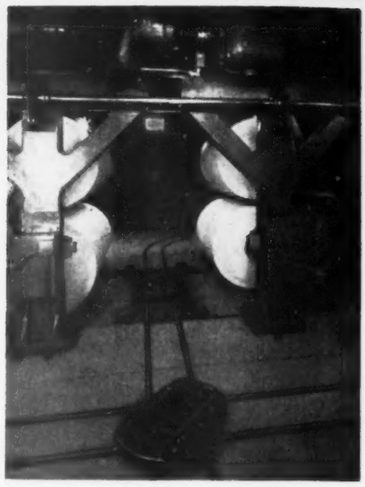
PERFORMANCE CURVE of Nashville drive shows that smooth acceleration eliminates speed jumps between threading and operating speeds. Dynamic braking does away with brake maintenance.

Engineered Electric Systems FOR NEWSPAPERS

GENERAL ELECTRIC

Kohler Reels for high speed presses





Special low-slung dollies and transfer tables and a maximum traction track system make roll handling easy.

Publishers with plans afoot to equip their high speed presses with the very latest in reels and roll handling equipment should investigate the several new developments that feature the Kohler Systems now being installed.

Kohler reels, with or without Flying Pasters, Lo-platform dollies and special turntables and trackage all carry new features.

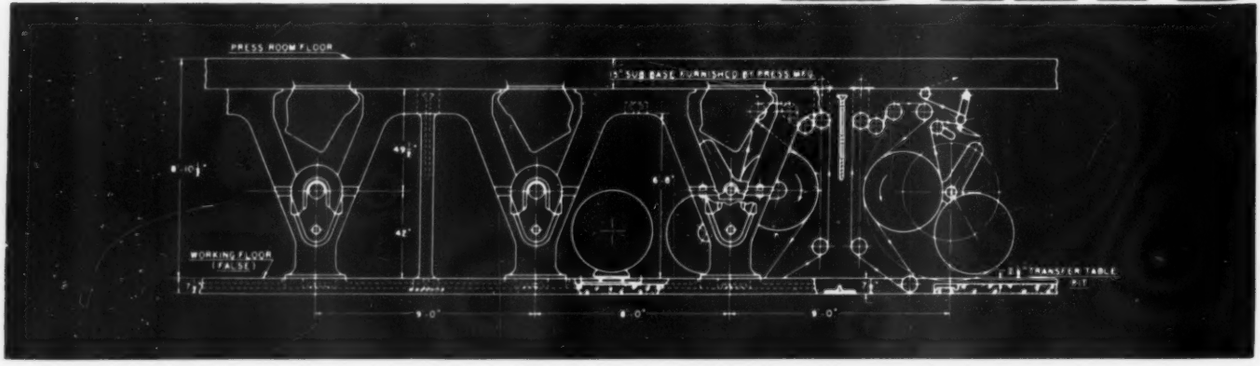
Contact Dilts at Fulton for full particulars, including folder 8-DM; also learn where recent installations may be inspected.

DILTS MACHINE WORKS

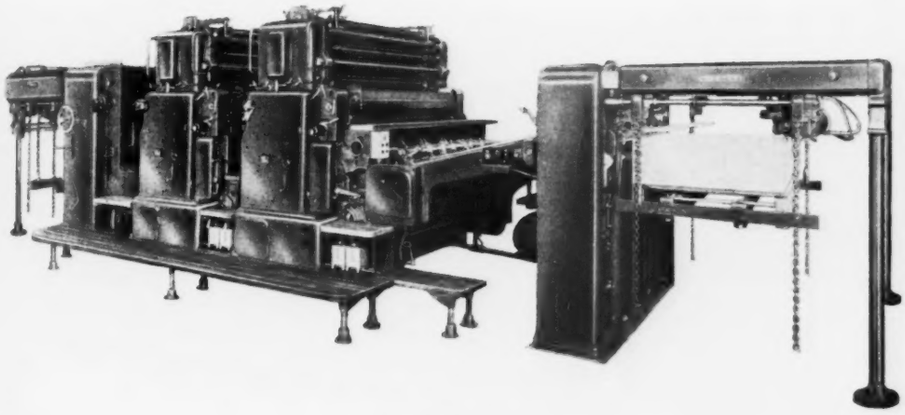
Fulton, New York

Division of THE BLACK-CLAWSON CO., Hamilton, Ohio

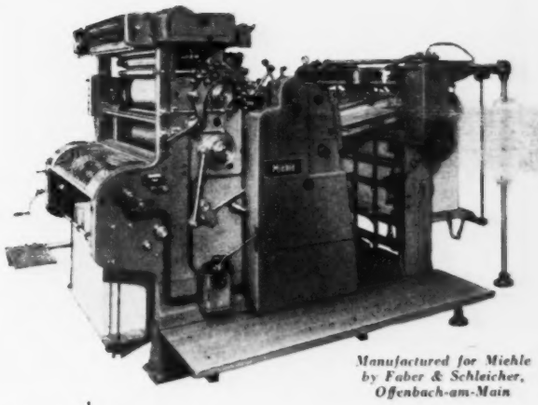
Dilts



large press • small press



IN OFFSET IT'S MIEHLE



Manufactured for Miehle by Faber & Schleicher, Offenbach-am-Main

The many large single and multicolor Miehle Offset Presses operating so successfully in leading lithographic plants throughout the country now have a worthy companion in the new single color Miehle 29 Offset—"the small press with the big press features." Send for illustrated folders describing these outstanding presses.

It's Miehle for highest quality and top production

MIEHLE PRINTING PRESS & MANUFACTURING CO.

Chicago 8, Illinois

for

the man on the inker . . . profit

Every true craftsman prides himself on his ability to produce top-quality work rather than just a passable job. His Harris press provides him with a machine which makes such top quality possible. His work is better, his production is better . . . his job satisfaction is greater. There are very few craftsmen who fail to appreciate that kind of personal profit.

for the man in the front office . . . profit

Cost sheets soon tell the plant owner how a press is doing . . . how much profit it's making. And he finds that new Harris presses are making even better records than earlier models—delivering more salable sheets every day, and that means profit.

for the man who buys printing . . . profit

Every printing buyer seeks a better run for his money. He learns to appreciate the kind of fine quality and fast delivery which Harris presses make possible. Advertising pieces tell his story better . . . mean more sales and more profit to him.

for the man on the street . . . profit

Few consumers know how or where printing is produced, but every consumer has seen and been influenced by labels, letters and literature that came from Harris-Seybold equipment. He reads; wants the product advertised, and buys . . . and thousands like him do the same. That makes mass production possible . . . keeps America's economy rolling . . . makes more jobs and more profit.

* * *

Commercial printing is basic to mass selling and mass production. Our part in it is to provide: offset lithographic presses, rotary letterpresses, power paper cutters, litho-chemicals, paper drills and bindery equipment. For fine graphic arts equipment consult: Harris-Seybold Company in all principal cities, or write to 4510 East 71st Street, Cleveland 5, Ohio.

HARRIS-SEYBOLD

HARRIS MODEL 575 TWO-COLOR OFFSET PRESS AT THE HERMAN-TORRES COMPANY, INC., NEW YORK CITY. PHOTOGRAPHED BY CORNELIUS

fine graphic arts equipment... for everybody's profit

what happens at night-

long steady runs - or down time due to roller problems?

Ideal ROLLERS

assure efficiency during those precious hours of presswork that shave your overhead and equipment costs. Make a profit on your night work by equipping with dependable, trouble-free IDEAL rollers. . . . They maintain roller settings and are SO EASY to keep clean. Give you quality runs that equal your best daylight production.

Ideals never sleep on the job!

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FOR A BETTER LIGHT IN EVERY WAY

—a light that is steadier, cleaner and more economical, use brighter

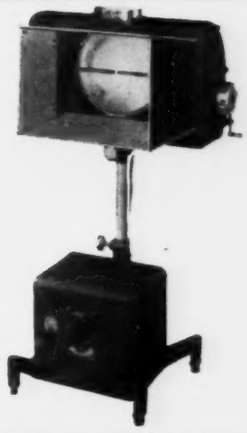
Strong

GRAFARC

Fully Automatic High Intensity ARC LAMPS

GRAFARC 95 AMPERE STANDARD PRINTING LAMP NO. 32000

with No. 33000 transformer and No. 34000-1 stand for use with vertical printing frames under 40" x 50".



GRAFARC 140 AMPERE PRINTING LAMP NO. 32500

with No. 33500 transformer and No. 3400-1 stand for use with vertical printing frames 40" x 50" and larger.

GRAFARC 95 AMPERE STANDARD CAMERA LAMP NO. 32002

for

PLATE MAKING

- Cut exposure time in half
- Assure sharper dots
- Eliminate dot undercutting by cross-over of reflected light rays

CAMERA GALLERY

- Uniform illumination on work of any size
- Extreme steadiness of light volume
- Constant color temperatures
- Eliminate illumination variable in accurate control of densities
- Power to punch through dense kodachromes

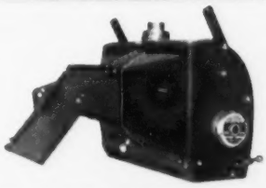
STEP AND REPEAT MACHINES

- Precise control of intensity for accurate repeats

NO OTHER LAMPS MEASURE UP TO THEM IN PERFORMANCE

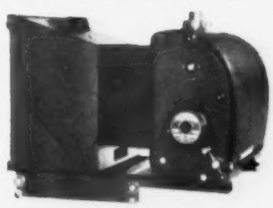
Approximately twice the light per arc watt results from the use of a silvered glass reflector, instead of a metal reflector. Adapters to fit most cameras and photo-composing machines. Present line supply wiring is usually adequate.

Write today for literature and prices.



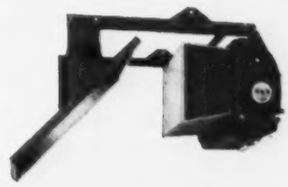
GRAFARC 95 AMPERE OVERHEAD PRINTING LAMP NO. 32221

for use with horizontal printing frames under 40" x 50". Burns in normal position thereby avoiding smoking of reflector and preventing ash from depositing on surfaces in the light path. A 45-degree angle mirror redirects the light downward to the work area.



GRAFARC 95 AMPERE PHOTO-COMPOSING LAMP NO. 32200

for Monotype Huebner MH photo-composing machines. Assures precise control of intensity for accurate repeats.



GRAFARC 140 AMPERE OVERHEAD PRINTING LAMP NO. 32520

for use with horizontal printing frames 40" x 50" and larger.

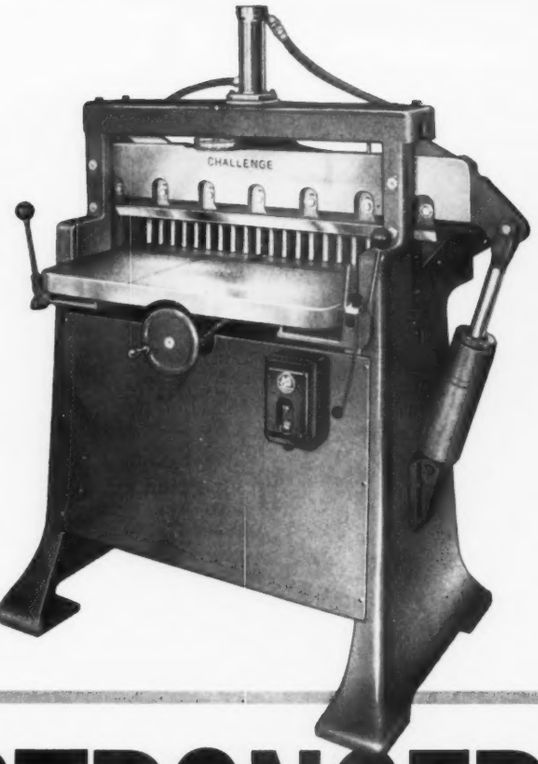
STRONG ELECTRIC CORP. 307 CITY PARK AVENUE • TOLEDO 2, OHIO

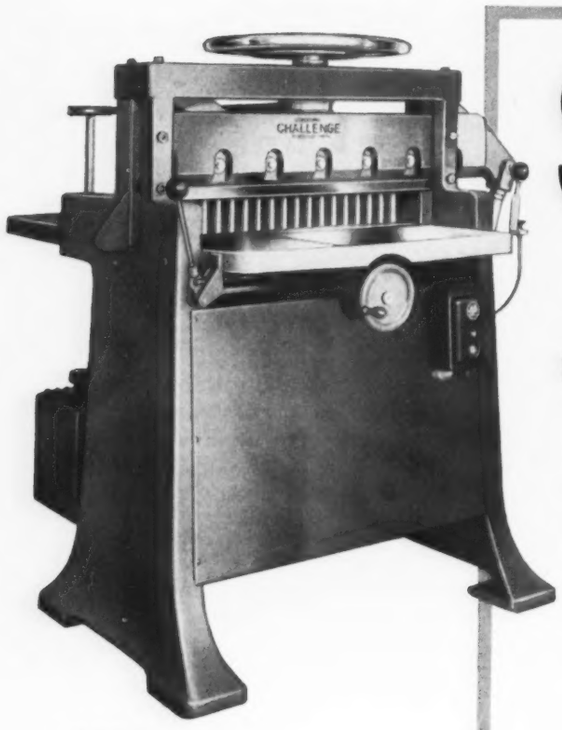
265F-305F
FULL-HYDRAULIC POWER

Both clamp and knife hydraulically controlled. Operator must use *both* hands . . . no chance of injury. Knife will not repeat.

Now – 7 Ways Better!

- Wider, stronger knife bar
- Greater pressure on knife bar
- More oil volume to cylinders
- Wider range of adjustment on knife
- Extended guards cover both ends of knife
- Visible gage indicates correct clamp pressure
- Clamp pressure is maintained while knife bar is operating





265F-305F
SEMI-HYDRAULIC POWER

Hydraulic power is applied to knife only. Hand clamp operated by easy-running, six-spoke wheel. Incorporates the first six improvements listed for the Full-Hydraulic cutter. Cutting is just as safe . . . just as accurate . . . but not as fast as with other model.

Challenge
TRADE-MARK ®

STRONGER

...MORE EFFICIENT

New Style F Challenge®

Power Paper Cutters

Two models . . . two sizes!

From arch to base, the *Style* F Challenge Paper Cutter is the most advanced machine ever designed for the small shop. Extra wide knife bar . . . greater hydraulic pressure . . . special safety guards are but a few of the many improvements added to the list of established Challenge features. Viz: solid center support . . . "duplex" measuring tape . . . "easily-squared" back-gage . . . two hand safety device . . . long side gages, front and back.

Powered by a steady flow of hydraulic energy, the *Style* F Cutter is easy and safe to operate; performs smoothly . . . efficiently . . . and economically. Full-hydraulic and semi-hydraulic models, each in two popular sizes, 26½" (265F) and 30½" (305F).

Write for complete details now. 723

THE CHALLENGE MACHINERY CO.
Office, Factories and Show Room: Grand Haven, Mich.
Over 50 Years in Service of The Graphic Arts

DEALERS IN ALL PRINCIPAL CITIES

Pressroom,
Brooklyn Plant,
Daily Mirror — New York

Mechanical Features THAT APPEAL TO Mechanical Men!

It's the men directly responsible for pressroom operation who most thoroughly appreciate the excellence of the design and precision construction of the HOE COLOR-CONVERTIBLE NEWSPAPER PRESS.

With the experience of generations of press building, Hoe has developed and incorporated in this press outstanding features that assure top-quality, high-volume production and dependable performance at all times.

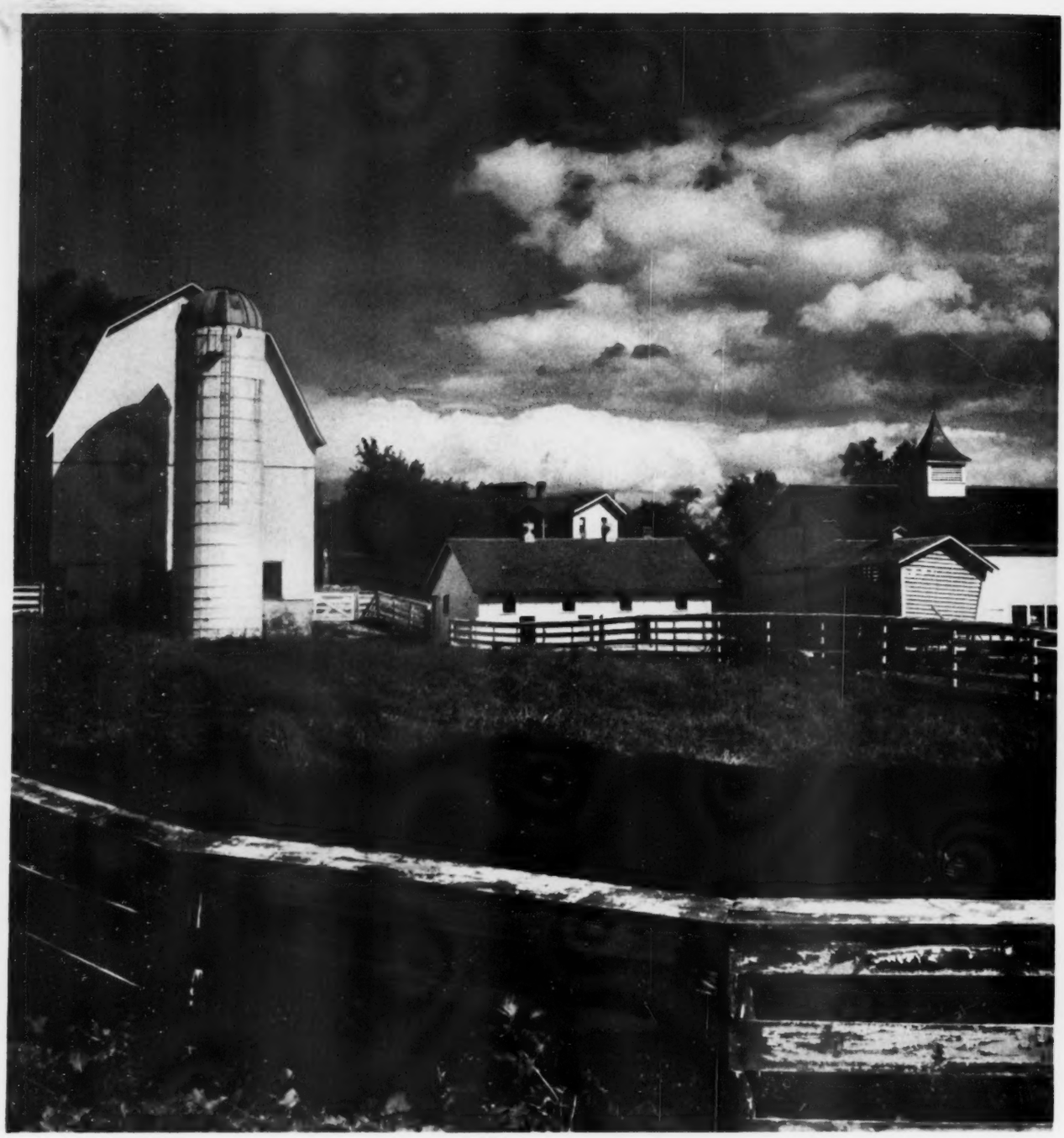
These features make possible such advantages as positive finger-tip ink control . . . easy and safe web-threading . . . instantaneous plate lock-up . . . visual micrometer impression adjustment . . . a selective main folder drive . . . convenient fold equalizing adjustments . . . web-splicing at full speed.

And finally, the COLOR-CONVERTIBLE is built so that additional color cylinders, duo ink rails and reversing mechanisms can be installed at any time at a minimum of expense and down time.

BUILDS THE BEST

R. HOE & CO., INC.

910 East 138th Street New York 54, N. Y.
BRANCHES: BOSTON • CHICAGO • SAN FRANCISCO
BIRMINGHAM • PORTLAND, ORE.



Uniform density, high color strength

inks with exceptional coverage for all

phases of newsprint, offset, and

letterpress printing.

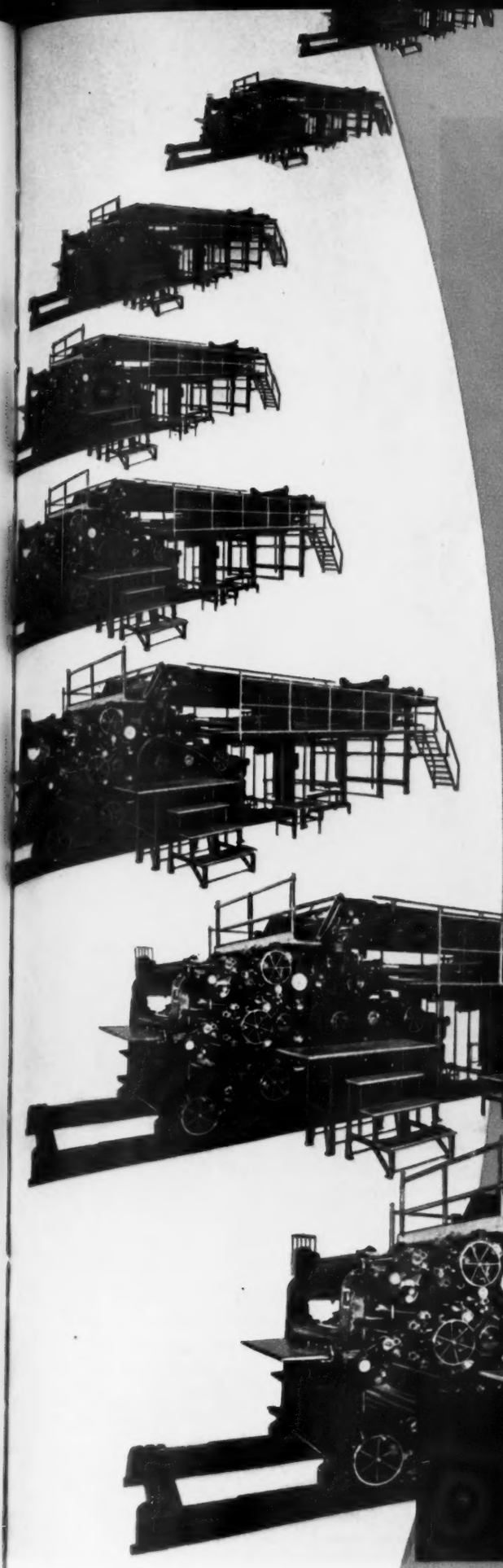
HERRICK *Inks*

William C. Herrick Ink Co., Inc.

Main plant and office
East Rutherford, N. J.

Branch plant
Jacksonville, Fla.

QUALITY NEWS, LETTERPRESS, AND OFFSET INKS



Why COTTRELL *owners are our biggest customers!*

BUSY COTTRELL multicolor rotary letterpresses have built highly prosperous businesses for many commercial printers.

Such printers, by maintaining highest quality and giving prompt dependable service, keep the big profitable contracts. The basic design of the 5-color press makes these vital qualities possible by holding accurate register and impression, during the printing of all colors without gripper transfers, and by printing all colors at one pass through the press.

Naturally such quality and service cause printing buyers to reorder or place new contracts with such printers —which is the reason printers reorder our presses.

This is why we say, "COTTRELL owners are our biggest customers every year!"

COTTRELL

C. B. COTTRELL & SONS COMPANY

Westerly, Rhode Island Claybourn Division, Milwaukee, Wis. Sales Offices: New York, Chicago, London

Mr. Ferd L. Cole,
Art Director,
McCandlish Litho Corporation,
Philadelphia, Penna.

says :

"I value the opinion of an Ansco Man!"

You'll find it hard to overestimate the value of the wealth of practical experience the Ansco Man can bring to the technical aspects of your operation. When he has a suggestion to make, you'll find it worth your while to listen. When you have a photographic question to ask, you'll find him just the man with the answer you're seeking.

Next time your Ansco Man calls, ask him to explain how you may be able to use Ansco Reprolith film to better advantage in your plant. You'll find his answers helpful.

ANSCO REPROLITH FILM

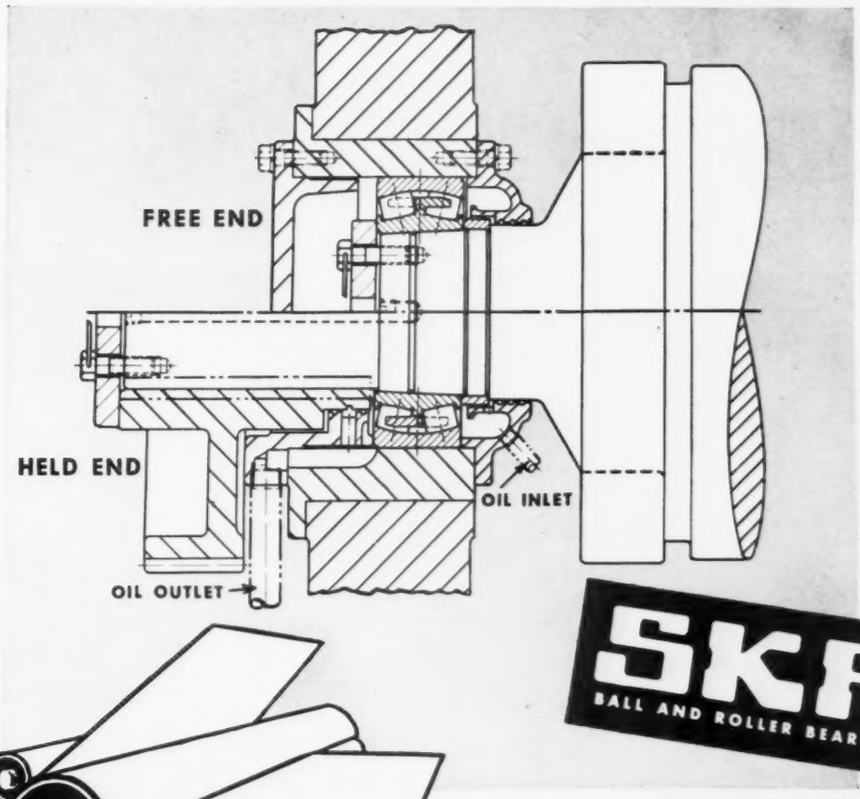
This film is intended primarily for making high contrast positives by contact printing from line and halftone negatives, but may also be used to produce excellent line and halftone negatives in the camera. Its blue-sensitive emulsion is coated on low-shrink safety base. For best results, develop in Ansco Reprodol, laboratory-packaged for your protection.

Like all Ansco graphic films, Ansco Reprolith brings you:

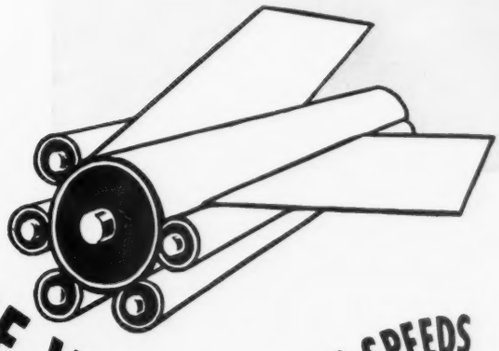
High Resolving Power... Fine Dot Etching Qualities ... Clarity in White Areas... Steep Gradation... Wide Developing Latitude.

IN THE GRAPHIC FIELD IT'S ANSCO

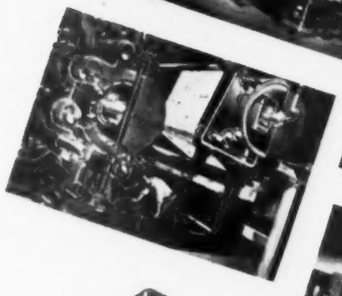
ANSCO, Binghamton, New York. A Division of General Aniline & Film Corporation. "*From Research to Reality.*"



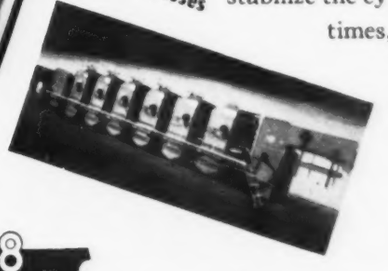
SKF
BALL AND ROLLER BEARINGS



FINE WORK at HIGH SPEEDS with SKF self-aligning printing cylinder bearings



SKF Printing Cylinder Bearing Equipped Presses



The SKF Self-Aligning Printing Cylinder Bearing answers the printing press builder's specifications for a bearing with a "large bore and relatively small outside diameter." SKF engineering features of bearing and mounting have resulted in its wide acceptance on black and color units; magazine presses; metal and paper offset presses, both sheet and web fed; gravure presses. Preload is uniform, eliminating any need for adjustment if replacement is ever necessary. Precision tolerances are applied to all important dimensions. Removal is easy, thanks to SKF's system of hydraulic removal. Simplified design does away with the need for an additional bearing to stabilize the cylinders or take gear thrust. Operation is cool at all times, eliminating undue expansion in the eccentric boxes. These advantages are proof again that SKF engineering helps all industry to put the right bearing in the right place.

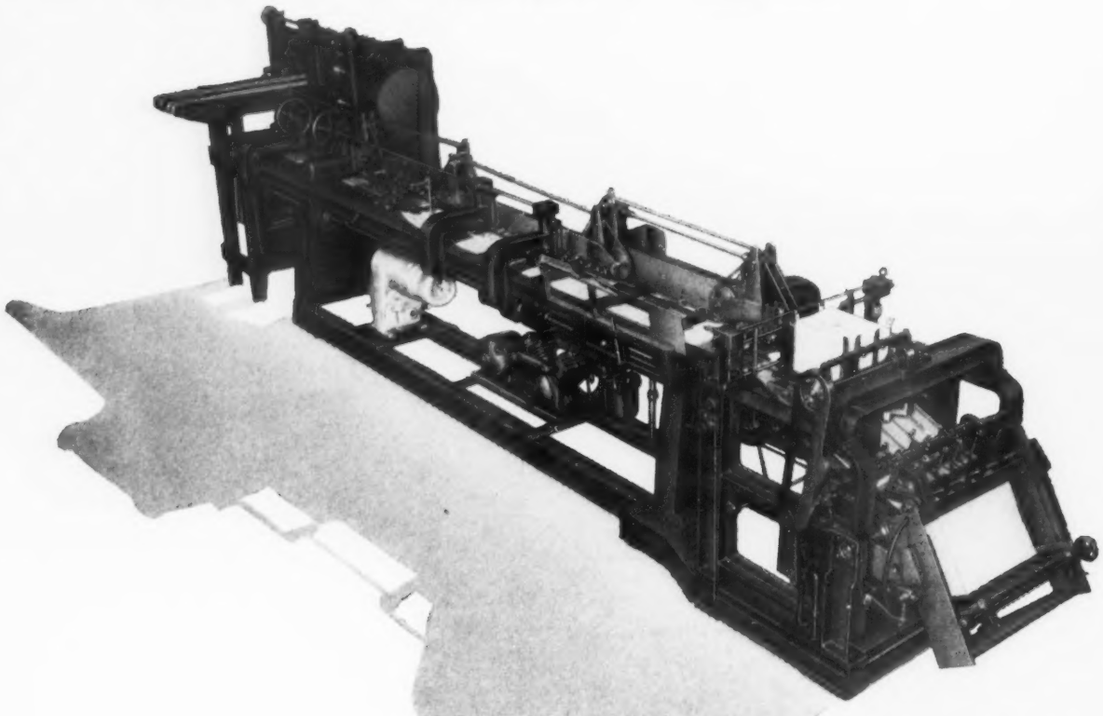
7263

8 REASONS WHY SKF IS PREFERRED BY ALL INDUSTRY

integrity • craftsmanship • metallurgy
tolerance control • surface finish
product uniformity • engineering service
field service

SKF INDUSTRIES, INC., PHILADELPHIA 32, PA.—*manufacturers of* **SKF** *and* HESS-BRIGHT *bearings.*

FLAT *WRAP* FOLD *WRAP* OR *BAND*



Collmar's Wrapping Machine **DOES ALL THREE!**

Cut mailing room bottlenecks through installation of this new combination machine. Individual copies can be flat wrapped, wrapper printed and addressed all in one operation at speeds to meet production requirements. Fold wrapping can be done with the same equipment.

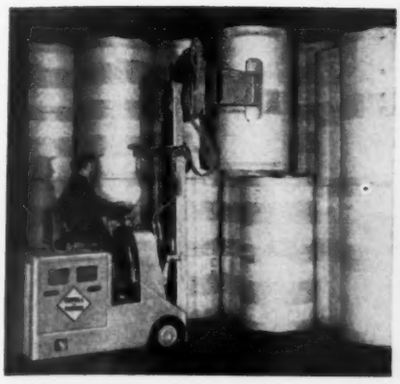
You can also band-wrap books for newsstand sale...feature article copy on the bands attracts buyers...bands protect copies from damage caused by "thumbing through."

SEND FOR COMPLETE INFORMATION ON THIS AMAZING NEW WRAPPING MACHINE TODAY.

Collmar Corporation

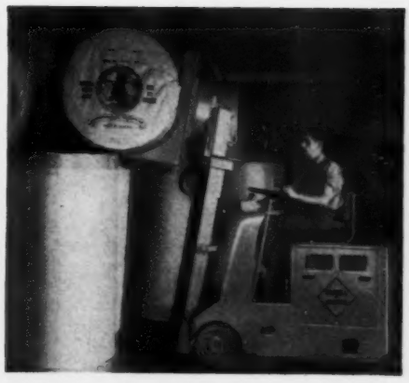
3138 W. Chicago Avenue, CHICAGO 22, ILLINOIS

Can You Handle Roll Paper Like This?

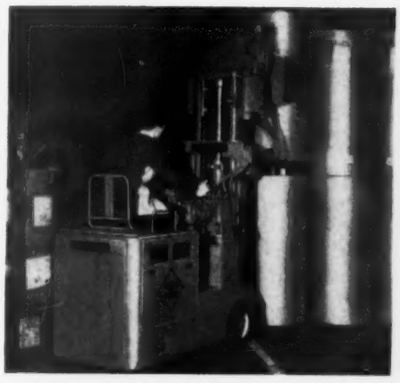


With an Elwell-Parker Roll Clamp Truck, you can store ceiling high without pallets or dunnage.

With an Elwell-Parker, you can store rolls absolutely snug because clamp can grip them short-of-center.

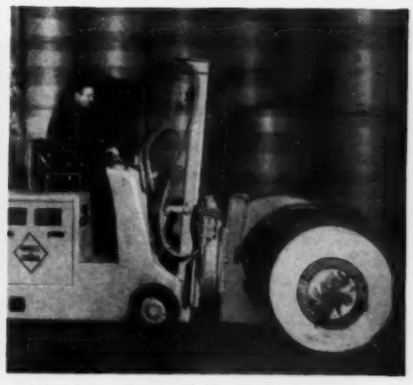


With an Elwell-Parker, you can pickup, carry and store the rolls horizontally or vertically.



With an Elwell-Parker and its selective pressures, you can handle many kinds of paper with different winding tensions and diameters.

With an Elwell-Parker and one operator, you can safely handle your rolls far faster than with a whole gang of laborers.



With an Elwell-Parker, you can reduce stock damage to less than ½ of one percent.

Not elsewhere can you get all these benefits because the E-P Roll Clamp Truck has superior functional refinements based upon Elwell-Parker's 30 years' specialization in roll paper handling.

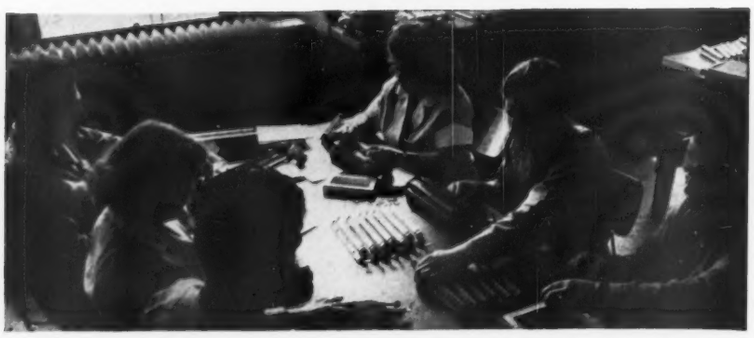
Get ALL the Facts on High-Speed, Low-Cost Handling of Paper Rolls. Send for NEW ILLUSTRATED BULLETIN. Write The Elwell-Parker Electric Co., 4196 St. Clair Avenue, Cleveland 3, Ohio.

ELWELL-PARKER
POWER INDUSTRIAL TRUCKS
Established 1893

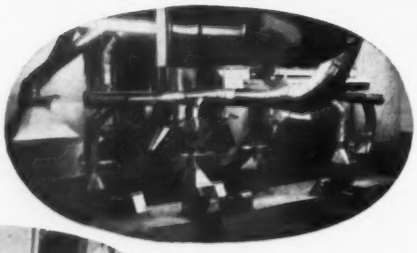
No-Fuss-No-Muss-----

----------WITH----- **MATRIX CONTRAST**

SERVICE



New fonts and sorts shipped from matrix manufacturers are checked against customer's color charts before applying color.



Modern processing rooms in Matrix Contrast plants where matrices are treated before application of colors.

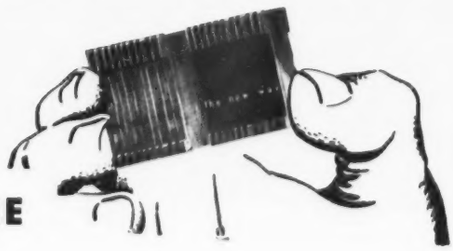
A Matrix Contrast Service Crew operating portable processing equipment in a newspaper plant.

Typical Matrix Contrast Service Truck which some of our 31 crews use to process matrices in your plant . . . day or night.

Dependable Matrix Contrast Service is the result of 27 years of specialized know-how. No fuss, no muss . . . It's clean, it's proven, it lasts.

There are six modern equipped service branches and 31 trained service crews ready to give prompt attention to processing your matrices.

When you buy Matrix Contrast Service, you get cleaning along with the processing of your matrices. Your present matrices are treated in *your plant* by our well-trained technicians without interrupting your plant schedules. In addition our New York and Chicago plants operate 24 hours a day to treat the reference marks on your new matrices.



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PRINTING
EQUIPMENT
Engineer
August 1952

Dehumidification

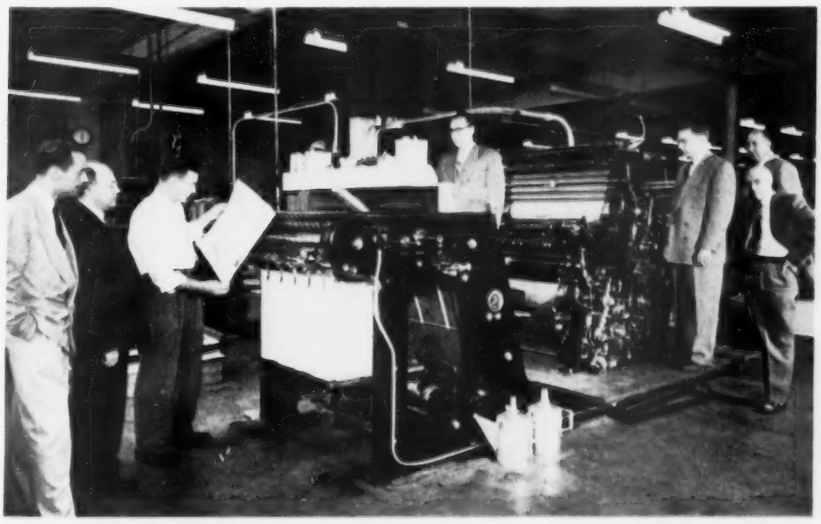
and its Effect in the Printing Industry

By **FRANKLIN C. WERTHEIM***
**Abbeon Supply Co., Jamaica, N. Y.*

PRINTING, photomechanical platemaking and binding plants are concerned with the problems of humidity within the plant itself. Too low a humidity can cause numerous problems associated with dry air such as deterioration of materials or products, dust, dry throat, static electricity, etc. In this discussion, however, we are concerned with the problems of too high a humidity, its cause, the problems it brings and what can be done to control it.

While it may seem strange to mention that some plants are concerned with the problems caused by high humidity, nevertheless many plants definitely do have these troubles.

Some of the problems caused by high humidity are as follows: (1) Dampness of materials in storage areas, (2) Dampness of products during manufacture, (3) Slowness in drying after manufacturing has been completed, and any of the following: Mold, rust, mildew, caking, dripping pipes, wet walls, corrosion, warping or mustiness.



New Litho Plant in Minneapolis—The Brings Press, a division of The Brings Corporation, which recently began operation in Minneapolis, Minn., installed a new two color 22 in. by 34 in. Harris. On hand for the initial run are (left to right) Carl. F. Struck, Harris-Seybold representative in the Twin Cities area; Lawrence M. Brings, President; Frank H. Loritz, Production Mgr.; Theodore H. Lindstrom, Sales Mgr.; Kieth M. Brings, General Mgr.; Luther Franzen, Vice President and Gus Young, Sales Representative.

EDITOR'S NOTE

Generally speaking, the high humidity season is waning. However, Printing Equipment Engineer *is publishing the accompanying article by Franklin C. Wertheim now. The idea is that those of our plant executive readers who wish to do so may study the subject of excess humidity and file the article for reference previous to the approach of the next high humidity season, and thus be in a position to eliminate trouble in the plant by installing dehumidifying equipment.*

Dehumidification

Dehumidification means to reduce the quantity of moisture in a given space or material to a required level. Air can hold various amounts of water vapor at different temperatures. Saturation, or 100% humidity means that air holds 2.87 gr.[1] per cu. ft. at 40 deg.; at 55 deg., 4.89 gr.; at 70 deg., 8.05 gr., at 80 deg., 11.08 gr.; in other words, the higher the temperature, the more the water in the air at the same relative humidity.

Relative Humidity

Relative humidity means the amount of water vapor in the air as compared to saturation. For instance, at the 80 deg., or 11.08 gr. figure mentioned above, 50% relative humidity would call for 5.54 gr.

[1] 1 lb. of water equals 7000 gr.

SOME RECOMMENDED HUMIDITIES IN GRAPHIC ARTS INDUSTRY

Purpose	Process	Rel. Hum.
Chemicals	General Storage	40–55%
Laboratory	General	60%
Paper	Storage	55%
Library	Book Storage	45%
Photographic	Drying	50%
Printing	General	60%
Cellophane	Storage	55–75%
General Comfort		50%

per cu. ft. So if we had a very damp room it might be necessary to take out quite a few thousand grains of water to get the relative humidity down to where we want it. A gallon of water is composed of over 58,300 gr. of water, so if we can take out a few gallons of water a day, we can keep dry nicely or dry out a good size room—that is, assuming that the air doesn't change too often. Generally speaking, above 70% relative humidity is the rust, mildew, mold and corrosion level. While below 40% relative humidity is ultra-safe, this may be too dry for some materials. Everything is dependent upon the product or area involved.

Excess Humidity Effects

Too much humidity in the air leads to various effects on different products. Metal will rust or corrode, textiles will mildew, powders will cake, etc. Machines and tools can be rendered useless in some cases by corrosion. Many firms store spare machine parts in basements and others storage rooms. Sometimes, a part will not be needed for years. When needed it is usually needed at once because production will be held up until it is put into place. If it is rusted or partially covered with pits, the whole purpose of a spare parts system may be contradicted.

Paper can become particularly unhappy when exposed to excess humidity. This is due to the fact that paper is highly hygroscopic by nature. Also it is manufactured with a grain and the fibers take up more moisture across the grain than with the grain. This leads to the old printers' trouble of wavy edges when the air gives up moisture to the outside of a skid of paper while the inside of the same stack remains comparatively dry due to the pressure. Curling of a sheet can be caused by the unprotected side of sheet of paper soaking up atmospheric moisture. Poor register can be caused by the expansion of a sheet while waiting its turn to feed through the presses in a damp atmosphere.

Too moist an atmosphere can also cause: Drag on the ink rollers, offsetting of inks, smudging, powder won't hold with metallic inks, lack of full color with inks drying by oxidation, slow drying in the bindery and many other troubles. Sink screen printers are particularly plagued by slow drying.

Other ways in which high humidity may cause damage are as follows: (1) Mold will form on hygroscopic materials; (2) Mildew will appear on textiles; (3) Bloom or Flush will appear on leather, plastics and synthetics; (4) Caking will occur in powdered materials such as talc and plastic; (5) Sweating and Dripping will occur on walls, windows and cold pipes with attendant damage to materials stored in the area of drip.

We can therefore see from the above that it is of prime importance that all materials used in printing—paper, inks, rollers, wood furniture and all other hygroscopic materials—be kept under the same atmospheric conditions so as to maintain equilibrium. For example, if one printer was to keep his paper on a hot dry upper floor and print it in a moist lower floor or basement considerable trouble would occur through off register and curling. While the same troubles would be encountered by a printer who kept his paper in a cool, moist warehouse or basement and the pressroom was on street level or a dry loft.

A job started in an unconditioned pressroom on one day should be carefully checked to see if the same atmospheric conditions prevail on the following day. This is particularly vital over a week-end, and during the start of the heating season when conditions can vary widely from day to day. Attention should also be given to punching holes in forms that will be collated at different times if they are to line up properly.

The use of industrial humidifiers and dehumidifiers will save a shop a lot of grief and in most instances will pay for their initial cost in the first few weeks of sticky or unusually dry weather. Some systems are so inexpensive to run that a few sheets of paper saved on each make-ready will more than take care of the electric bill and maintenance.

Removing Moisture from Air

There are a number of ways through which moisture can be removed from the air: (1) By means of a full air conditioning system whereby the air is subjected to various processes, heated, cooled, humidified, cleaned and dehumidified. This method, of course, is the most costly. (2) Dehumidification can be accomplished by means of various substances and chemicals which absorb or combine with the water vapor and are then either disposed of or reactivated. (3) The refrigerating unit method can be compared to an ice cold pitcher of water on a summer day. Have you ever noticed the droplets of water which collect on a cold pitcher in the summertime? The self-contained cabinet is fitted with a small refrigerating unit and a large cold coil. Air is drawn over the coil. The temperature of the air is lowered which action squeezes out the moisture. The moisture drips into a bucket at a rate up to 3 gal. a day, depending upon how hot and humid the air passing between the rings of the coil.

The Champion Paper and Fibre Co. is the Detroit Art Director's 1952 advertising award winner. Exhibited in the trade paper color photography class, the winning ad was an actual four-color demonstration of the printing performance of Champion Papers' Kromekote. E. W. Brown (left) represented the firm's advertising agency, Campbell-Ewald, Detroit, at the awards dinner. Champion Papers' figures included Elsa Wehr, Asst. Advertising Mgr., and Herb Schnetzky, Sales (at right).

33rd Annual Convention

INTERNATIONAL ASSOCIATION OF PRINTING HOUSE CRAFTSMEN

Jefferson Hotel • St. Louis
August 10, 11, 12, 13, 1952

Sunday—August 10

9:00 A.M. to 12:00—Registration

1:00 P.M. to 4:00 P.M.—Registration

8:00 P.M. to 9:00 P.M.—Opening Session

Monday—August 11

9:00 A.M.—Registration

9:30 A.M. to 10:30 A.M.—Business Meeting

10:30 A.M. to 12:00

Widening Horizons for Craftsmanship

Presiding: Gordon J. Holmquist, First Intl. Vice Pres.

Training for the Future

William Gutwein, Chairman Supervisory Training Committee

Safety—A Production Necessity

Willard A. Anderson, Chairman Safety Committee

12:30 P.M. to 2:30 P.M.

Club Management Luncheon

Presiding: Thomas P. Mahoney, Third Intl. Vice Pres.

Well Planned Programs Pay Off

Harold Gale, Chairman Intl. Club Program Committee

Your Club Bulletin—The Tie That Binds

Harold G. Crankshaw, Chairman Club Bulletin Service Committee

Membership—A Never-ending Project

Harry R. Christopher, Chairman Membership Commission

Keeping Records that Count

Albert L. Kolb, Intl. Treasurer

*3:00 P.M. to 5:30 P.M.

Design and Typography Clinic

Presiding: Howard N. King, Second Intl. Vice Pres.

A panel comprised of the following: John Lamoureux, Vice Pres., Warwick Typographers, St. Louis; Glenn M. Pagett, Typographic Service, Indianapolis; W. J. van Wormer, jr., Art Director, McCormick-Armstrong Co., Wichita, Kan.; William P. Gleason, Colonial Press, New York; A. R. Tommasini, Production Mgr., University of California Press, Berkeley, Calif.; Howard N. Keefe, Manager, Arrow Press, Cincinnati, O., will answer questions on copy preparation, type design and layout, and various composing room problems.

*3:00 P.M. to 5:30 P.M.

Looking Ahead with the Big Three

Presiding: Edward A. Aitken, Chairman Intl. Technical Commission

* Two Clinics Simultaneously

Offset Lithography Continues Rapid Progress
Milton Mild, Supt. of Art Dept., Western Printing & Lithographing Co., Southwestern Div., St. Louis, Mo.

Letterpress Makes Strides
Robert Thiele, U.S. Printing & Lithographing Co., Cincinnati, O.

Gravure Presents a Continued Challenge
Frank Preucil, Research Director, Chicago Rotoprint Co., Chicago

7:30 P.M. to 11:00 P.M.—Municipal Opera

Tuesday—August 12

9:30 A.M. to 10:30 A.M.—Business Meeting

10:30 A.M. to 12:00—Printing Week Clinic
Presiding: A. R. Tommasini, Chairman, Public Relations Commission

Scanning 1953 Printing Week
Ferd Volland, jr., Chairman, Printing Week Committee

Getting Organized for Printing Week
Morris H. Reaves, Government Printing Office, Washington, D. C.

Financing the Printing Week Observance
Darrell J. Taylor, Frayn Printing Co., Seattle, Wash.

2:00 P.M. to 5:30 P.M.—Tour of City and Anheuser-Busch

9:00 P.M. to 11:30 P.M.—Boat Ride on the S.S. Admiral

12:00 'til—Caucus

Wednesday—August 13

9:00 A.M. to 12:00—Business Meeting

12:30 P.M. to 2:30 P.M.—Luncheon

The Craftsmen's Part in Human Relations
Talk by Claude V. McBroom Director of Mfg., Meredith Publishing Co., Des Moines, Ia.
Introduced by Robert L. Jolley, Scheduling Mgr., Meredith Publishing Company

2:30 P.M. to 4:30 P.M.

The Eighth District Answers
A Production Problem Clinic
Presiding: J. Homer Winkler, Intl. President
Members of Panel: Gardner Wright, Manager, Acme Paper Co., St. Louis (Paper); John Braznell, Secy.-Treas., Braznell Company, St. Louis (Ink); Robert Dunn, Manager, Sam'l Bingham's Son Mfg. Co., St. Louis (Rollers); Gene C. Meston, Vice Pres., Capital City Printing Plate Co., Des Moines, Ia. (Electrotypes); W. J. van Wormer, jr., Art Director, McCormick-Armstrong Co., Wichita, Kan. Copy Preparation and Layout); L. P. Albaugh, Pressroom Supt., Meredith Publishing Co., Des Moines, Ia. (Presswork—Letterpress); Wm. H. Talley, Modern Bindery, Tulsa, Okla. (Bindery); Willard J. Roeder, President, Beaumont Art Studios, St. Louis (Offset Plates); Ed. Nastali, Spangler-Mindlin Press, Inc., Kansas City, Mo. (Presswork-Offset); and others who will be qualified to speak on photoengraving and composition.

7:00 P.M.—Dinner Dance—Gold Room, Hotel Jefferson

MILTON MILD

ROBERT E. THIELE

FRANK PREUCIL

CLAUDE V. McBROOM

Craftsmen Convention Speakers—Among the speakers at the 33rd Annual Craftsmen's Convention to be held in St. Louis, August 10-13 are Milton Mild, Robert E. Thiele, Frank Preucil and Claude V. McBroom (above). Mild will address the Craftsmen on the subject *Offset Lithography Continues Rapid Progress*. He is the Superintendent of the Litho Arts and Platemaking Depts. of Western Printing & Lithographing Co., Southwestern Div., St. Louis, Mo. Since the start of his career in 1926, Mr. Mild has been associated with Woodward & Tiernan Printing Co., St. Louis, and the Wolff Printing Co. He is a member of the St. Louis Craftsmen's Club, the Research Committee of the Lithographic Technical Foundation, and the Technical Assoc. of the Graphic Arts.

Mr. Thiele, whose topic will be *Letterpress Makes Strides*, is General Supt. of the Western Div., United States Printing and Lithograph Co., Cincinnati, O. After attending Northwestern University, the speaker started his career in the printing industry with R. J. Kittredge & Co., Chicago, where he advanced to the position of factory manager. He became production manager of his present company in 1937 and two years later was named General Supt. He is a past president of the Cincinnati Craftsmen's Club.

Preucil, Research Director of Chicago Rotoprint Co., Chicago, will speak on *Gravure Presents a Continued Challenge*. He is known as a writer of articles dealing with color photomechanics and is a member of the Chicago Club of Printing House Craftsmen.

McBroom's talk is entitled *The Craftsman's Part in Human Relations*. He is Director of Mfg. of the Meredith Publishing Co., Des Moines, Ia. The speaker is a graduate of Iowa State College with a Bachelor of Science degree in Electrical Engineering. He has been with the Meredith Publishing Co. for 20 years.

J. HOMER WINKLER, *President*

Craftsmen's Official Family

GORDON J. HOLMQUIST
First Vice President

HOWARD N. KING
Second Vice President

THOMAS P. MAHONEY
Third Vice President

ALBERT L. KOLB
Treasurer

PEARL E. OLDT
Executive Secretary

J. Homer Winkler, Intl. President, has participated in Graphic Arts activities since his graduation from George Washington University in 1925. He is Technical Advisor to the Graphic Art Div. of Battelle Institute, Columbus, O., a position he has held since 1944. He formerly held assistant manager posts at both the Ace Electrotype Co., Cleveland, and the Buffalo Engraving and Electrotype Co., Buffalo, N. Y., and was research associate with the National Bureau of Standards, Washington, D. C. He plays an active role in Graphic Arts organizations with particular emphasis on printing research.

Howard N. King is Second Vice Pres. of the International. In addition, he is Vice President of the Maple Press, York, Pa., and Typographical Counselor to Intertype Corporation. He has been with Intertype for more than ten years and has traveled throughout the country addressing Craftsmen's clubs and other Graphic Arts groups. He has prepared a number of addresses on typography and is recognized as an authority on modern typographic layout. King served as Intl. representative-at-large in 1949-50. He is a past president of the York Craftsman Club which he is serving this year as program chairman.

Albert L. Kolb, the Intl. Treasurer, is Manager of Marine Trust Co.'s Printing Dept. in Buffalo, N. Y. He was elected to the treasurer's post at the 1950 Intl. Craftsmen's Convention held in Chicago, succeeding Edward T. Samuel of Cleveland. Mr. Kolb organized the printing department of Marine Trust after World War I and has served in an executive capacity for more than 30 years. Prior to this, he worked in a printing shop owned by his father and then in several plants in Buffalo. He has been a member of the Buffalo Club since 1937 which he served as president in 1943-44.

Gordon J. Holmquist, Intl. First Vice Pres., is a partner in the Cole-Holmquist Press, Los Angeles. Holmquist is a graduate of the University of Los Angeles from which he holds a Bachelor of Arts degree. The three elements in printing liked best by Vice Pres. Holmquist are typography, layout and design. Says all his business experience before becoming a partner in his present firm was with the Times-Mirror Printing and Binding House, Los Angeles. He is a past president of the Los Angeles Craftsmen's Club and of the Pacific Society of Printing House Craftsmen.

Thomas P. Mahoney is Intl. Third Vice Pres. and also Vice Pres. of Regensteiner Corporation, Chicago. He joined the company in August 1950, coming from American Color Process Co., Cleveland, where he was general manager. Other milestones in Mahoney's career in the Graphic Arts industry were as production manager of White & Wyckoff Mfg. Co., Holyoke, Mass.; department manager of Sheffield Company, New London, Conn.; and superintendent of the Whitlock Press, Inc., Middletown, N. Y. He is a past president of the Connecticut Valley and Cleveland Craftsmen's Clubs and a present member of the Chicago Club.

Pearl E. Oldt was appointed Intl. Executive Secretary in 1947, a position he still holds. Previously, he served as a teacher of printing on the Board of Education of Grand Rapids, Mich. His other connections in the printing industry were with the Fred Ruckert Co., and the American Printing Co., both of Lincoln, Nebr., and the Board of Education, St. Joseph, Mo. While in Grand Rapids, he served as president of that city's Craftsmen's Club for two years and as its secretary for 12 years. He holds an impressive list of degrees from a number of colleges.

Fred C. Baillie (right) Immediate Past President, is Superintendent of the Offset Div. of Canadian Bank Note Co., Ltd., Ottawa, Ont. Can. He has been associated with that company for more than 30 years. His firm prints security work only, such as bank notes, bonds and stamps for the Dominion of Canada, as well as stock certificates for private industry and municipalities. Baillie is a past president of the Ottawa Club of Printing House Craftsmen. At one time he was connected with the Mortimer Company of Ottawa and the American Bank Note Co., New York, N. Y.

G. Stuart Braznell (left) is General Chairman of this year's St. Louis Convention. He is also General Mgr. of the Braznell Company, St. Louis ink manufacturer. Mr. Braznell has served as director of the National Printing Ink Research Institute and is a past president of the St. Louis Ink Assoc. He has been a member of the St. Louis Craftsmen's Club for more than 20 years. He was instrumental in the development of equipment for measuring color in printing and has spoken on this subject before Graphic Arts groups. He is a sincere advocate of basic and applied research.

Harry R. Christopher (left) is this year's Chairman of the Intl. Membership Commission. Together with Co-chairman George Wise, Mr. Christopher has aimed the spear point of the International membership campaign at the retention of present members as well as bringing new Craftsmen into the fold. Christopher has been President and Treasurer of the Paper Supply Co., Baltimore, Md., since its founding in 1940. He has held most of the offices in the Baltimore Club of Printing House Craftsmen including that of president. He has also served as Fourth District Representative.

George Wise (right) the Co-chairman of the Membership Commission, is also Superintendent of Dugan-Millis, Inc., commercial printers of Cleveland, O. He has been associated with this firm for the past ten years. Mr. Wise also held the position of superintendent of Stevenson-Foster Co., Pittsburgh, for nine years. He started his career in the printing industry with the H. J. Heinz Co. at the age of 13. He was among the students of the first class in printing from Carnegie Institute of Technology. He is a past president of the Cleveland Craftsmen's Club and served two terms in the presidential capacity with the Pittsburgh Club.

Lee Augustine (right) a Craftsman of long standing, is Chairman of the Intl. Publications Commission. In business life, he is Vice Pres. of The Printing Machinery Co., Cincinnati, O. He has held numerous posts in the Cincinnati Club of Printing House Craftsmen and has taken an active interest in the activities of the Fifth District which dates back to 1927. He's a participant in many industry, civic and patriotic affairs. As chairman of the Cincinnati Club's vocational committee, Augustine suggested and put into effect a plan for increasing enrollment at the Graphic Arts High School in that Ohio city.

Amadeo R. Tommasini (left) is Intl. Public Relations Commission Chairman, an appointed post he has successfully handled for three years. Tommasini is also Designer and Production Mgr. of the University of California Press, Berkeley, Calif., where he has been located since 1938. Born in Buenos Aires, Argentina, S. A., the Public Relations Chairman was first employed in this country with Schwabacher-Frey Co., San Francisco, where he remained for 16 years. He is a past president of the San Francisco Club. A proud achievement is his handling of the typography for the United Nations charter.

Edward A. Aitken (left) Chairman of the Intl. Technical Commission, is now Service and Public Relations Mgr. of Ault & Wiborg Co. of Canada, Ltd., Toronto. Prior to this he was superintendent of the Bryant Press, Ltd. of the same city. Positions held during Aitken's 35 years of experience in the printing industry include those of pressman and pressroom foreman. He is a past president of the Toronto Club and a past district representative of the Third District. He has been an active participant in many past International conventions and a contributor to several trade publications.

Harold G. Crankshaw (right) is completing another successful year as Chairman of Club Bulletin Service. Crankshaw comes from Washington, D. C., where he is printing instructor at Central High School and principal at Western Evening High School. In the industry he was connected with the Akron Typesetting Co., Commercial Printing & Lithographing Co., Printing Dept. of Firestone Tire & Rubber Co., and Printing Dept. of Miller Rubber Co., all of Akron, O. He was also associated with the Hampton Normal & Agric. Institute, Hampton, Va., and the Empire State School of Printing, Ithaca, N. Y.

Harold G. Gale (right) Chairman of Club Programs, is Division Mgr. of the Label Mfg. Div. of Wapless-Platter Co., Ft. Worth, Tex. Mr. Gale has been associated with his present company for 24 years. His other associations during his printing career include service with the Ledger Company, Marvin D. Evans Co. and the Stafford Lowden Co., all of Ft. Worth. In this connection, he has held the posts of pressman, pressroom foreman and plant superintendent. He is a past president of the Ft. Worth Club. Gale has pioneered in the development of four color process food labels.

Alfred T. Peters (left) is Chairman of the Intl. Constitution and By-Laws Committee. In addition, he is Vice Pres. and Sales Mgr. of the Thos. C. Peters Co. in Utica, N. Y. He has been connected with this company for more than 30 years. Peters has the honor of being the first president of the Utica Craftsmen's Club in 1926 and has served as Second District representative for several terms. His outside activities include participation in the Utica Lions Club, New York State Board Assoc. and Faxton Masonic Lodge No. 697. Planning and selling are the most popular with him.

Byron G. Culver (left) Chairman of Graphic Arts Education, is Supervisor of the Dept. of Publishing and Printing, Rochester Institute of Technology, Rochester, N. Y. Mr. Culver's association with RIT now totals 32 years. Well known as a printing educator, he is a past president of the Intl. Graphic Arts Education Assoc. and present secretary of the Education Council of the Graphic Arts Industry. He is also a past president of the Rochester Craftmen's Club an associate member of the New York Press Assoc. and a member of the board of directors of the Rochester Advertising Council.

Neil B. Powter (right) holds the post of Intl. Historian. He has been associated with the Howard Smith Paper Mills, Ltd., for Montreal, Can., for 23 years where at present he is Advertising and Sales Promotion Mgr. Prior to joining this firm, he was with the Garden City Press, Quebec, Can.; Cleveland Paper Co., Cleveland, O.; and E. H. Stuart Co., Pittsburgh, Pa. Mr. Powter attended Carnegie Institute of Technology. He is a member of the Montreal Craftsmen's Club where he served on the board of governors for several years. A mountain cottage, gardening, photography and fishing are his hobbies.

Gradie Oakes (right) heads the Intl. Advisory Council this year. In the Graphic Arts industry, he is President and General Mgr. of Process Color Plate Co. of Chicago. Mr. Oakes' company makes plates by several processes and is known for adopting new techniques promptly. He is a member of the Chicago Club of Printing House Craftsmen and was president of the International in 1948-49. He was also general chairman of the International convention in Chicago in 1950. The Advisory Council is made up of past president of the Association who stand ready to give seasoned advice to all Craftsmen.

C. M. (Mark) Wilson (left) is Chairman of the Instruction Literature Committee. He is also Production Mgr. of the Donaldson-Woods Co. of Atlanta, Ga., a commercial printing firm he has been connected with for 29 years. In Craftsmanship circles, he is active in the affairs of the Atlanta Club which he served as president and held other offices. The objective of Wilson's committee is to encourage the use of, and create a desire for, literature published by printing equipment manufacturers. The Committee has requested local clubs to devote one meeting a year to the care, maintenance and operation of printing machinery.

John A. McLean (left) heads the Intl. Mobilization Committee. For the past 18 months, Mr. McLean has been Special Consultant to the Printing Industry of America, Inc., and the Research and Engineering Council of the Graphic Arts Industry. He was associated with the Government Printing Office, Washington, D. C., for 40 years, retiring as assistant production manager. Fifteen years of this time was spent as superintendent of platemaking. Earlier in his career, he was connected with various plants in New York, N. Y., and other places in New York State. He is a past president of the Washington Craftsmen's Club.

J. L. Frazier (right) is Chairman of the Committee on Participating Memberships. Mr. Frazier retired recently as editor of the *Inland Printer* which he now serves as Consulting Editor. He had been associated with this trade publication for 37 years. He is the author of the books *Type Lore* and *Modern Type Display* and was earlier identified with several Kansas newspapers, both as a printer and in editorial capacities. He was the original founder of a select group of typographers called Typocrafters. Frazier, a resident of Evanston, Ill., is a member of the Chicago Club of Printing House Craftsmen.

Ferd Voiland, jr. (right) Topeka, Kan., was appointed General Chairman of Printing Week last February. He is a member of the Topeka Craftsmen's Club and State Printer of Kansas. Following his graduation from Kansas State College in 1925, Voiland opened a commercial printing office in Topeka. In 1943, he dissolved his printing company to serve overseas with the American Red Cross in North Africa and Italy. While in Europe he was elected State Printer, returning from World War II to take over his new duties on July 1, 1945. He served as assistant state printer of Kansas from 1933 to 1941.

Basil M. Parsons (left) is Chairman of the large Committee on Redistricting the International. He is also Secretary and Sales Mgr. of the Thomson-National Press Co., Franklin, Mass. Parsons is well known in Craftsmen circles as chairman of the nominating committee at International conventions. He served last year as Intl. representative-at-large. He's been a member of the Providence, R. I., Craftsmen's Club since 1927 and served that club for two years as president. A veteran of more than 30 years in the platen press industry, he has spoke before many Craftsmen groups on *Printed, Embossed and Die-Cut Specialties.*

Willard A. Anderson (left) the Chairman of the Intl. Safety Committee, is also Plant Engineer for the Government Printing Office in Washington, D. C. He has been with the GPO for 22 years. Prior to this, Anderson was a structural engineer with the U. S. Treasury Dept. He holds a Bachelor of Science degree from the Illinois Institute of Technology. He has pioneered in the functional use of color and lighting in improving working environment in the printing industry. The Safety Chairman is also General Chairman of the Printing and Publishing Section of the National Safety Council. He's a member of the Washington Club.

William F. Gutwein (right) serves the International as Chairman of the Committee on Supervisory Training. In business life, he is Director of Employee and Public Relations of the C. T. Dearing Printing Co., Louisville, Ky. Prior to joining the Dearing firm in 1948, he held the positions of journeyman pressman and industrial relations director at the McCall Corporation, Dayton, O. He is a graduate of Antioch Cooperative College where he received a Bachelor of Arts degree. Gutwein is a member of the Louisville Craftsmen's Club. He likes public speaking, music, gardening, and, he adds, children.

G. Elmer Leach (right) has served this past year as Intl. Representative-at-Large. He is Owner of the Leach Printing Co. located at 807 Grand Ave., Des Moines, Ia. He has worked as a small-town printer, composing room foreman and assistant superintendent. An active participant in Craftsmen affairs, Mr. Leach has served the Des Moines Club as its president, vice president, secretary and Educational Chairman. He has also served as Intl. Eighth District Representative. He is a member of the Des Moines Chamber of Commerce, the Masonic bodies including Knights Templar, Consistory (32 deg.) and Shrine. Baseball is his favorite pastime.

James T. McGowan (left) is rounding out his second year as First District Representative. He is also marking his 34th year with Carter Rice & Co., Providence, R. I., where at present he holds the position of Manager. The First District is comprised of the following clubs: Boston, Connecticut Valley, Merrimac Valley, New Haven District, Providence and Worcester County. McGowan served as president of the Providence Club of Printing Craftsmen in 1946 and again in 1947. Prior to his present International appointment, he served the First District as Deputy Representative.

Henry A. Schneider (left) Representative of the Second District which includes the following Craftsmen's Clubs: Adirondack, Albany, New York, Newark, Northern New York, Syracuse and Utica. He has been associated with the Charles Francis Press, Inc., since 1925 where he now holds the posts of Corporate Secretary and Controller. His duties pertain to production in the Editorial Development Div. Mr. Schneider served last year as Deputy Second District Representative and as president of the Club of Printing House Craftsmen of New York, Inc., from 1948 to 1950. He attended Columbia University and New York University.

Richard M. Seymour (right) is Deputy Second District Representative. In addition, he is owner of the Printing Equipment Co. situated in Latham, N. Y., a firm established four years ago. Seymour has served in the printing industry as mechanical superintendent of the Atlanta (Ga.) *Journal* and in the same position with the Schenectady (N. Y.) *Union-Star*. He was also composing room superintendent of the Rochester (N. Y.) *Democrat & Chronicle*. He is a member of the Albany Club of Printing House Craftsmen and has served as its president. Widely known in the printing field, he lists golf and printing as his hobbies.

John L. Osias (right) this year stepped from deputy representative to Representative of the Fourth District comprised of the Baltimore, Lehigh Valley, Philadelphia, Richmond, Washington and York Clubs of Printing House Craftsmen. In the printing business world, Osias is Manager of the Richmond, Va., Branch of Interchemical Corp., Printing Ink Div. He has been associated with IPI for 19 years. Previously, he was with several ink manufacturing companies in Norwood, Mass., Cincinnati and Philadelphia. He is a member of the Richmond Club for which he served as secretary and president.

George R. Keller (left) is completing his initial year on the International Board of Governors as Deputy Fourth District Representative. His place of business is Washington, D. C., where he is President of George R. Keller, Inc., a firm which deals in printing machinery and supplies. Mr. Keller's association with this company dates back to 1940. Previous to this, he states he was in the printing business in Detroit and New Haven, Conn. He was also manager of American Type Founders' branches in Detroit and Washington. Keller is a member of the Washington Club of Printing House Craftsmen.

John M. Morehouse (left) is Fifth District Representative and also Central District Mgr. of Harris-Seybold Co. with headquarters in Cleveland. The Fifth District is made up of the following Craftsmen's clubs: Cincinnati, Cleveland, Columbus, Dayton, Detroit, Erie, Fort Wayne, Grand Rapids, Indianapolis and Lansing. Also Louisville, Pittsburgh, Michiana, South Bend and Toledo. Morehouse has been connected with the Graphic Arts for more than 25 years. He has been associated with Remington Rand, Inc., and Printing Machinery Co. At present, he is a member of the Cleveland Craftsmen's Club.

Marvin R. Lohr (right) is active in his second year as Fifth District Deputy Representative. He is associated with Ideal Roller & Mfg. Co. as Field Engineer. Lohr previously was connected with Brownell Photo-Lithograph Co., Detroit, as assistant manager and with Graphic Arts Process Corp., Detroit, as purchasing agent and estimator. He has served as secretary of the Detroit Craftsmen's Club and as treasurer of the Printers Supplymen's Guild of Detroit. He is also a member of that city's Litho Club. His two hobbies are hunting and golf.

Ken N. Cramer (right) is the appointed Southern Deputy of the Fifth District. He is in his second year in assisting Fifth District Representative John Morehouse by contacting the Cincinnati, Columbus, Dayton, Indianapolis and Louisville Clubs. Cramer became a member of the Cincinnati Club in 1934. In addition to his Craftsmen activities, he's served as first vice president of Cincinnati's Printers Supplymen's Guild. He is associated with Ideal Roller & Mfg. Co., Inc., as District Manager. His hobby leads him to outdoor life, including fishing and golfing.

Fielding A. Utz (left) has been Sixth District Representative for a number of terms. The Craftsmen's clubs in that area include Chicago, Five County, Milwaukee-Racine, and Rock River Valley. He is President of Milwaukee Printers Roller Co., Milwaukee, a firm which he has been associated with for more than 30 years. Not only is he a roller manufacturer, but he has been a printing machinery machinist as well. Utz is a member of and has served in different official capacities with the Milwaukee-Racine Club of Printing House Craftsmen. Gardening is his hobby.

Joe McConnaughey, (left) the Seventh District Representative, pays visits to the Atlanta, Jacksonville, Little Rock, Memphis, and Nashville Clubs of Printing House Craftsmen. Having been associated with the Harris-Seybold Co. for the past 12 years, McConnaughey, at present, holds the title of Southern District Mgr. He makes his headquarters in Atlanta, Ga. He formerly was connected with the Whiting Paper Co. as sales representative in the Southern territory. The Seventh District Representative holds a Bachelor of Science degree from the University of Virginia.

Royce N. Kent (right) is the Representative of the Eighth District. This District consists of the Cedar Rapids, Central Illinois, Des Moines, Kansas City, Omaha, St. Louis, Topeka, Tulsa, Waterloo and Wichita Clubs. Kent is Assistant Supt. of the Bemis Bros. Bag Co., Omaha, Neb. He attended the University of Omaha and his formal education included work in electrical and mechanical engineering and cost accounting. After finishing school, he worked four years with T. F. McPherson on composing room surveys of a number of newspapers including Omaha (Neb.) *World-Herald, Detroit News* and others.

Ben Edwards (right) activities in Craftsmanship resulted in the present Deputy Eighth District Representative serving as president and a member of the Board of Directors of the Wichita (Kan.) Craftsmen's Club. He has also served as president of the Eighth District. He is President and Manager of Edwards Typographic Service, Inc., and Secretary of Kel Litho Artists, both of Wichita, Kan. Edwards also taught printing in Kansas City, Mo., for three years and has worked as Monotype operator for several Kansas printing plants. He served recently as president of Printing Industry of Wichita.

Ted Brown (left) serves as Representative of the Ninth District which includes the following Craftsmen's clubs: Dallas, Fort Worth, Houston, Oklahoma City and San Antonio. In addition, he is associated with the Western Bindery Co., Oklahoma City, Okla., where he holds the present post of Secretary-Treasurer. Brown served his apprenticeship with the Dorsey Printing Co. of Dallas, Tex., and then became bindery foreman of Western Bank and Office Supply Co. of Oklahoma City, a position he held for 18 years. He is a charter member of the Oklahoma City Craftsmen's Club and served as its secretary for four years.

Ken Comfort (left) Representative of the Tenth District, comes from Seattle, Wash. He represents the following Craftsmen's Clubs: Blue Mountain, Calgary, Edmonton, Portland (Ore.) Seattle, Southwest Idaho and Vancouver. He is Owner of the Pilot Press, Seattle, with which he has been connected with since 1934. Comfort has served as president of the Seattle Craftsmen's Club and, at present is Vice President of the Pacific Society of Printing House Craftsmen. He is also an active member of the Printing Industry of Seattle. He names skiing and golf as his hobbies.

G. Lyall Roper (right) of Edmonton, Can., is Deputy Representative of the Tenth District. He holds the post of Manager of Commercial Printers, Ltd., located in Edmonton. He has been associated with this firm for 17 years. Roper is also President of Plastic Platemakers, Ltd., makers of plastic printing plates and stereo mats. Thus it can be seen his interests are diverse. He has also served as plant superintendent of this same firm. The Deputy Representative was the first president of the Edmonton Club of Printing House Craftsmen. Wood working and sailing are his hobbies.

Edward O. Strong (right) the Eleventh District Representative, is associated with the California State Printing Plant in Sacramento, Calif. The Eleventh District includes the Honolulu, San Francisco and Sacramento Clubs of Printing House Craftsmen. Strong is Composing Room Foreman at the California State Printing Plant where he has worked for the past 40 years. He is a past president of the Sacramento Craftsmen's Club and a past president of the Pacific Society of Printing House Craftsmen. In his leisure time, the District Representative retires to his cabin in the Sierras.

Lee Farmer (left) as Representative of the Twelfth District in which there are the following clubs: Albuquerque, Citrus Belt, Los Angeles, Orange County, Phoenix, Santa Barbara and San Fernando Valley. He is President and Pacific Coast Mgr. of Pacific Printing Ink Co., Los Angeles. He has served the ink manufacturing industry in color matching, sales and management capacities. Previously, he was sales representative for Geo. H. Morrill Co., Ault & Wiborg, and Sales Mgr. for Interchemical Corporation, Printing Ink Div. Farmer is a member of the Los Angeles Club of Printing House Craftsmen.

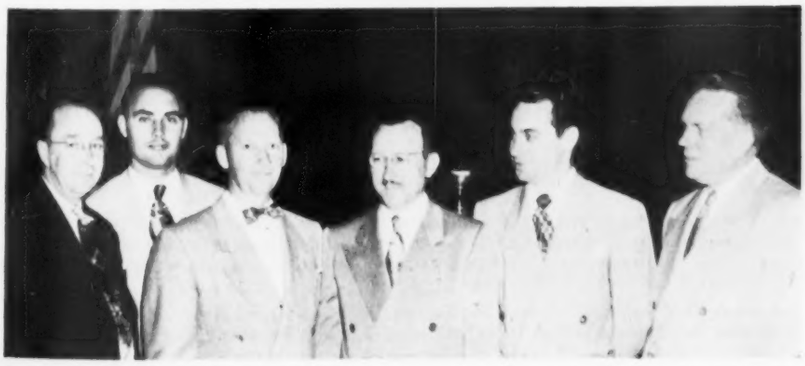
Blair Lord (left) Deputy Representative of the Twelfth District, has been connected with the Rubidoux Printing Co., Riverside, Calif., for the past 16 years where he holds the title of Plant Superintendent. Lord has a particular interest in the layout and design of high class brochure and magazine material. He is a member of the Citrus Belt Craftsmen's Club which he served for six years as secretary and a president in 1950-51. He was secretary-treasurer in 1947-48 of the Pacific Society of Printing House Craftsmen. His hobbies consist of stamp collecting and model railroading.

Herbert Threlfall (right) holds down the post of Thirteenth District Representative. Clubs comprising this district are Cape Town, South Africa, and Havana, Cuba. Threlfall is President and Treasurer of the John F. Greene Co., Inc., Providence, R. I. Prior to joining this company, he was connected with the Akerman-Standard Co. of Providence for 30 years where he served as foreman, superintendent and general manager. He served his apprenticeship in the printing trade in England. He is a past president of the Providence Craftsmen's Club. Usually is in good humor at the annual conventions.

Harry E. Rice (right) is Fourteenth District Representative. This district is comprised of the following clubs: Duluth-Superior, Minneapolis, Regina, St. Paul and Winnipeg. Rice is connected with the Sigmund Ullman Co., Div. of Sun Chemical Corp., in St. Paul, Minn. His particular interest is in research and formulation of printing inks. A graduate of the University of Chicago with a Bachelor of Science degree in chemistry, he has served the industry in various technical and research capacities. He has held all offices in the St. Paul Club of Printing House Craftsmen. Gardening, carpentry and fishing are his hobbies.

Did Not Reach Us in Time

Absent in this presentation of officers, committee chairmen and district representatives of the Intl. Assoc. of Printing House Craftsmen, Inc., are two Craftsmen who are worthy of being brought to the attention of the readers of *Printing Equipment Engineer*. Portraits of Thomas Anderson, Canadian Chairman of the Intl. Membership Commission, and Don Runge, Third District Representative, did not reach us in time before going to press. Mr. Anderson is associated with the Anderson Printing Co. in Vancouver, B. C., Canada. Craftsmen's clubs in Mr. Runge's District include those located in Buffalo, Hamilton, London, Montreal, Ottawa, Rochester and Toronto. Runge is a resident of Ottawa (Ont.) Canada.



New Officers (for 1952-1953) of the San Fernando Valley (Calif.) Club of Printing House Craftsmen—Left to right, they are: Carl Schultz, Second Vice Pres.; Jack Elliott, First Vice Pres.; Bob Eaton, President; LeRoy Merget, Secy.-Treas.; Clyde Eddo, Rec. Secy., and Stafford Jones, Printing Week Chairman.

Alexander Murray, an Eastman Kodak Co. research scientist, recently celebrated his 25th anniversary with the Kodak company. Murray, who last year was named the outstanding person in the Graphic Arts industry by the Technical Assoc. of the Graphic Arts Industry, is a research associate in the Graphic Arts Dept. of the Kodak Research Laboratories. In his research at Kodak, Murray has been distinguished for his work on color correction processes, including modern masking methods, fluorescent color correction, and an electronic color separation and color correction machine. He introduced use of the densitometer to the engraving field, and has made a study of chemical resist coatings and photosensitive resins. He has been granted more than 50 patents covering developments in the Graphic Arts field.

St. Louis Craftsmen's Club's Big Moment

Here are the officers for the 33rd Annual Convention of the Intl. Assoc. of Printing House Craftsmen. The committee is functioning successfully under the leadership of General Chairman G. Stuart Braznell. It is anticipated that the St. Louis meeting will be tops with respect to the educational program under supervision of Raymond C. Kuhl.

In this picture, front row left to right, are: Raymond C. Kuhl, Educational; Harry C. Reimer, Assistant Chairman; Robert A. Heinrich, Executive Chairman; G. Stuart Braznell, General Chairman; Bernard Meyer, Executive Chairman; William B. Chase, Secretary; Tom Shepherd, Publicity.

Center row left to right: Edgar Steinbruegge, Hospitality; Don D. Durham, Reception; Jos. H. Borgman, Reservation; Gardner Wright, Ways and Means; A. H. Kotteman, Ways and Means; James B. McNames, Exhibits; Joseph Vogt, Hotel; Robert Dunn, Hospitality.

Back row left to right: Joseph Ottersbach, Plant Visitation; Herman Friebel, Printing; Harold Axtell, Registration; Michael Imperial, Entertainment; Emmet Sudhoff, Transportation; Alex Heinrich, Ladies; Lloyd J. Mueller, Attendance; Henry M. Henselmeier, Treasurer; Edw. G. Hunsinger, Hotel.

San Gabriel Valley (Calif.) Club Receives its Charter—A number of International's prominent Craftsmen participated in the charter presentation ceremonies to the San Gabriel (Calif.) Club of Printing House Craftsmen. Shown above is Don Johnston, President of the recently organized San Gabriel Valley Club being presented the official charter by Intl. First Vice President Gordon J. Holmquist at a special meeting of the combined Southern California Craftsmen's Clubs held in Los Angeles on June 6.

Above (left to right) are: Gordon Matson, Los Angeles Club; Paul Wegfahrt, San Gabriel; Lee Farmer, 12th District Intl. Representative, Los Angeles Club; A. R. Tommasini, Intl. Public Relations Chairman, San Francisco Club; Perry R. Long, First Intl. President, Los Angeles Club; Don Johnstone, President, San Gabriel Valley (Calif.) Club; Gordon Holmquist, Intl. First Vice President, Los Angeles Club; Lester Hollingsworth, San Gabriel Valley Club.

Back row (left to right): Jack Robertson, Citrus Belt (Calif.) Club; Blair Lord, Deputy 12th District Representative, Citrus Belt Club; Stacy Haige, San Fernando Valley Club; George Woods, Jimmy Martin (hidden) and Leon Jasmine, all of San Gabriel Valley Club; Robert Kerr, Los Angeles Club; Frank Savery and Emerson Cavell, both of San Gabriel Valley Club.

A Bit of St. Louis Craftsmen's Club History

This account of the St. Louis Club of Printing House Craftsmen was sent to ***Printing Equipment Engineer*** by T. L. Shepherd, Past President of the Club, and also Chairman of the St. Louis International Convention Publicity Committee. Many of the executives taking part in the establishment of the Club together with those who have guided the Club since its inception are well known from an International standpoint.)

THE St. Louis Club of Printing House Craftsmen, host to the 33rd Annual Convention of the International Association of Printing House Craftsmen, Inc., August 10 to 13, was first organized during the summer of 1920 under the direction of Sam C. Alexander. At this time Sam C. Alexander, Wm. B. Chase, Fred H. Jones, Val Krapp, George Newton, Wm. A. Norton, George Ortleb and Henry C. Steinmeyer held meetings to formulate the organization plans.

The actual inception of the club was September 25, 1920, when Charles Walden acting as chairman of the meeting, conducted an election at which time the following officers were chosen: George Ortleb, President; Fred H. Jones, Vice Pres.; Wm. A. Norton, Secretary; Val Krapp, Treasurer. Board of Governors: J. C. McNamara, Wm. B. Chase, Henry C. Steinmeyer, Vince Kuelker, A. G. Williamson, H. H. Chapline. The first By-Laws and Constitution were written by Wm. B. Chase, George J. Newton, A. H. Brownser, J. C. McNamara and Robert Hicks.

The Charter was received September 26, 1920, the St. Louis Club being the thirteenth in the International Organization. By January 1921 as many as 155 members and guests were attending meetings.

In the years 1930, 1933 and 1937 the St. Louis Club was host to the Mississippi District Conference. The International Convention was held in St. Louis in 1931—and in 1940 St. Louis was the host city for the Eighth District Conference.

Membership in the St. Louis club has reached the 200 mark and stays right around this peak.

Many of its past presidents are still active in the club's affairs and there are men of 25 years continuous membership who hold life memberships in the club.

The following men have been presidents of the club—and many of the names are familiar in International past and present activities.

George Ortleb.....1920-22
Vince Kuelker.....1923
*Ralph Doyle.....1924
Wm. B. Chase.....1925
Clifford H. Mareness.....1926
*John B. Sippy.....1927
August Hausher.....1928
Elmer Held.....1929-30
George Ortleb.....1931
Rawleigh T. Shepherd.....1932
Raymond C. Kuhl.....1933
Fred Dietrich.....1934
Lloyd A. Bartlet.....1935
Paul H. Schulze.....1936
Lawrence L. Albert.....1937
*Charles A. Rugger.....1938
Edgar D. Steinbruegge.....1939
Henry O. Moser.....1940
Joseph A. Ottersbach.....1941
Walter A. Beisterfeldt.....1942
Virgil Gerak.....1943
John F. Welch.....1944
Z. John Kowalskey.....1945
Henry M. Henselmeier.....1946
**Thomas L. Shepherd.....1947-48
Harry C. Reimer.....1948-49
G. Stuart Braznell.....1949-50
Herman Friebel.....1950-51
J. Denter Rink.....1951-52
Bernard Meyer.....1952-53

*Deceased.
**Served for year 1947 and 6 months of 1948—Club changed fiscal year.

BOOKS

Tricks of Printing Trade

THIS little book is a manual consisting of valuable methods in the conduct of the small printshop. Its author, W. H. Richards, is proprietor of a well managed printing business. The book contains 50 subjects related to the business office, production methods and mechanical hints for owners or managers of small shops who must attend to all kinds of duties incidental to the business. Illustrated are The Order Book, Index to Order Book, Job Ticket and Estimate Blank, Indexing Storage Galleys. Among the valuable hints in shop operation are Avoid Piecing Slugs, Printing a Small Type Form On a Large Press, Lifting Heavy Forms on a Large Job Press, Printing Two Colors with One Impression, To Feed and Gather Duplicate Sheets. An 8 p. insert entitled *Building a Printing Business on a Solid Foundation*, contains valuable information which has been jelled down by the author. Slugs in Half Sizes Not Needed, Numbering Machine Hints, Setting Curved Lines and Circles, Strings and Tie-ups, Cutting Strings for Tags, Stringing Tags, Printing Church Envelopes, Printing Ribbon Badges, Razor Blades for Cutting Rules, Linotype Your City and State, Filling the Gasoline Can, The Screwtop Glass Jar, Saving Ink in Tubes, Having a Mailing List, Emergency Belt Lacing, Gingulators, How to Open Envelopes, Arranging Cards in Alphabetical Order, Printing Envelopes, Counting Sheets, Non-Inflammable Type Cleaner, Sell Your Old Type (how to do it), Rule Across a Letterhead full width and others.

Tricks of the Printing Trade—By W. H. Richards. Hard bound in blue crash cloth; size 3½ in. by 5⅞ in., 40 pages. Price $1.75 cash with order. May be ordered through *Printing Equipment Engineer*, 1276 West Third St., Cleveland 13, Ohio.

St. Louis Craftsmen's Club Officers—The St. Louis Club is host to the 33rd Annual Convention, Intl. Assoc. of Printing House Craftsmen.

In this picture, front row, left to right, are Emmet Sudhoff, 2nd Vice Pres.; Bernard Meyer, President; Robert Heinrigh, 1st Vice Pres.

Standing, left to right: Joseph Borgman, Asst. Secretary; Joseph Ottersbach, Treasurer; William B. Chase, Secretary.

RIT Graduates Have Jobs

With a full summer session yet to go, approx. 30 per cent of the graduates of the Department of Publishing and Printing at the Rochester (N.Y.) Institute of Technology were placed in jobs by the end of June this year, according to Supervisor Byron G. Culver. Another 50 per cent have job prospects. Some 50 per cent of the 50 graduates may also be eligible for service with the Armed Forces. As in preceding years, it is expected that all seniors who have not been placed in jobs or taken in the Armed Forces by the end of the summer session, August 15, will have been placed within 30 to 60 days after graduation.

Henry Appraises Phototypesetting

After 20 months use of Fotosetter in his plant—Usage falling into pattern with respect to experience so far—Processing requirements analyzed.

By THOS. P. HENRY*

*Thos. P. Henry Co., Detroit. Address delivered before Craftsmen's Fifth District Conference, Detroit, June 1952.

EDITOR'S NOTE

In the October 1951 issue, Printing Equipment Engineer *published the address entitled* Film vs. Lead, *which had been delivered by Thos. P. Henry before the September 1951 Buffalo convention of the National Association of Photolithographers. Since that time, due to additional actual plant experience, Mr. Henry has prepared a new and amplified appraisal of the economic and process possibilities of the Intertype Fotosetter equipment which is operated in his plant in Detroit. This address was delivered before the June District Craftsmen's Conference in Detroit and is presented to our readers in abstracted form.*

DURING the past few years, starting shortly after the end of World War II, many people both in and out of the printing industry, have freely predicted the demise of our composing rooms in their present form. You have all heard statements like "Ten (or 15 or 20) years from now there will be no metal type in existence, except, perhaps in museums." These gentlemen may, of course, be right—but they will need a revolutionary new method of handling the product of the phototypesetting machine which is to replace our lead manufacturing equipment. Even if such a process is developed by some fortunate and brilliant inventor, we suspect our prognosticators will still find that it takes considerably longer than 10 or 20 years after such invention to replace our lead type. And no one to our knowledge has made much progress on creating a successful new film makeup and alteration technique.

Before we get down to today's specific situation, as far as phototypesetting is concerned, let us briefly look at the broad question of technological improvement in our printing industry. We know of no machine whose development has immediately put its predecessor out of business. Presses 40 to 50 years old are still being used. Typesetting machines almost that age are still setting type. Improvements come slowly in our industry.

When we also consider that for lead to be completely antiquated, we would probably have to change most of our pressrooms to offset, or rotogravure, or the so-called dry offset, it seems likely that the death of lead type will be deferred for many years.

On the other hand, there are many individuals who seem to feel that machine typesetting by means of photography is doomed to failure—that time spent thereon has been an ill-advised waste. Although we feel phototypesetting is not going to put our regular composing rooms out of business, we do feel that it will have a definitely increasing place in the Graphic Arts industry.

We are not discussing any method of photographing hand-set type composition. Nor are we considering any use of the typewriter principle, no matter how ingenuous the improvements may be. By phototypesetting we mean the justified composition of copy set at a keyboard giving a photographic product the equivalent or better than that set by our recognized lead typesetting machines.

There are several machines with radically different methods of accomplishing this, in various stages of development. The only machine in actual commercial use today is the Fotosetter which is manufactured by Intertype Corporation.

For the past 20 months our plant has been working with an Intertype Fotosetter. The first three or four months were devoted primarily to installation of the equipment and training of our personnel. Since January of last year, we have been soliciting and setting production work on this machine.

With this machine we are able to set justified lines up to 42 picas at a keyboard, thus producing type characters on film with machine production roughly equivalent to composition in lead. The film itself is then developed, proofread, corrected in a relatively simple manner, and Ozalid proofs furnished to the customer. Upon final approval, we supply film positives or negatives to the plate maker.

Because of the work we have done on this process we feel that we are qualified to discuss the many changes from conventional procedures which arise in setting type by the use of a camera. The Fotosetter system has three main components. The first and major part of the operation consists of a typesetting machine and the accessories therefor. The other two essential units are a well-equipped darkroom and a stripping procedure which includes a unique method of making line corrections.

Paper Manufacturers' Plant Dedication—Paper Manufacturers Co. dedicated its new 200 thousand sq. ft. plant in Northeast Philadelphia recently. As part of the ceremonies, John Thumm (center), President of the company's independent union, presented to President Frank O'Neill (left) and Vice Pres. Louis O'Neill (right) of Paper Manufacturers Co., a bronze plaque on behalf of the employees. A bas-relief bust of F. A. O'Neill, founder of the firm who died in 1941, was unveiled by his sons Frank and Louis. The new plant is located at 9800 Bustleton Ave., Philadelphia.

The Fotosetter keyboard is identical with the regular keyboard except for the addition of one alphabet. (117 channels as opposed to 90). Normally, we carry a font of small caps in the regular magazine which we cannot do on our conventional machines. However, these additional twenty-seven keys permit us to insert another special characters on certain jobs. In fact, our regular hot metal slug machine would be considerably more efficient if they had been originally designed in the same manner as the Fotosetter keyboard.

As with regular slug machines, the Fotosetter is so arranged that we can combine Roman and Italic, Light and Bold. With four magazines of 12 point the operator has 8 sizes of type from 9 to 36 point, a total of 32 fonts at his command without leaving the machine.

Accurately Laid Out Copy

As far as the machine typesettng is concerned, the major difference between lead and film is the necessity for most accurately laid out copy for the Fotosetter. Line spacing should be done on the machine so that stripping changes are at a minimum. Text leading cannot be changed without re-setting the manuscript.

The darkroom technique which is needed to handle the product of the Fotosetter is familiar to all printing plate makers. It involves use of the usual equipment such as a temperature controlled sink, contact printer, viewing table, etc. We have encountered no problems which could not be overcome by normal methods.

One of the keystones in the whole Intertype system of phototypesetting is the development of a practical method of making proofreading corrections.

By the use of a line-correcting device, changes are relatively simple. A line-strip punch insures perfect alignment and parallelism when corrected lines are submitted. Accuracy is assured by the use of register holes punched into the film when the type is being set.

An illuminated vacuum frame aids when the inserted strips are fastened with transparent tape.

Makeup of Fotosetter film involves the same stripping problems as any other film makeup. This process is expedited by the use of a precision trimming board and a vacuum make-up table, each taking advantage of the register holes on the Fotosetter film. Certain types of work can be done with less effort or with no more effort than is required when made-up in lead.

As far as the product of the Fotosetter is concerned, we are convinced that it is the best way we have yet seen to put type on film. Results we have accomplished cannot be attained by any other method with which we are familiar. There is no question of the excellent quality which can be achieved by this process.

After our corrected Fotosetter film is approved by the customer, our method of operation is entirely photomechanical. Without putting ink on paper at any stage of the proceedings, we furnish to the platemaker whatever type of film is specified—either positive or negative with emulsion on either side.

It has been our purpose to review briefly the Fotosetter mechanical highlights so that they would be fresh in our minds when we discuss other phototypesetting machines, cost of Fotosetter production as opposed to slug machines and other related problems. Before proceeding to these other topics, perhaps it will be helpful to analyze what Intertype Corporation has accomplished to date from a manufacturing and installation standpoint. It is obvious that this successful manufacturer of slug equipment has invested millions of dollars in the expectation that phototypesetting will be a commercial success.

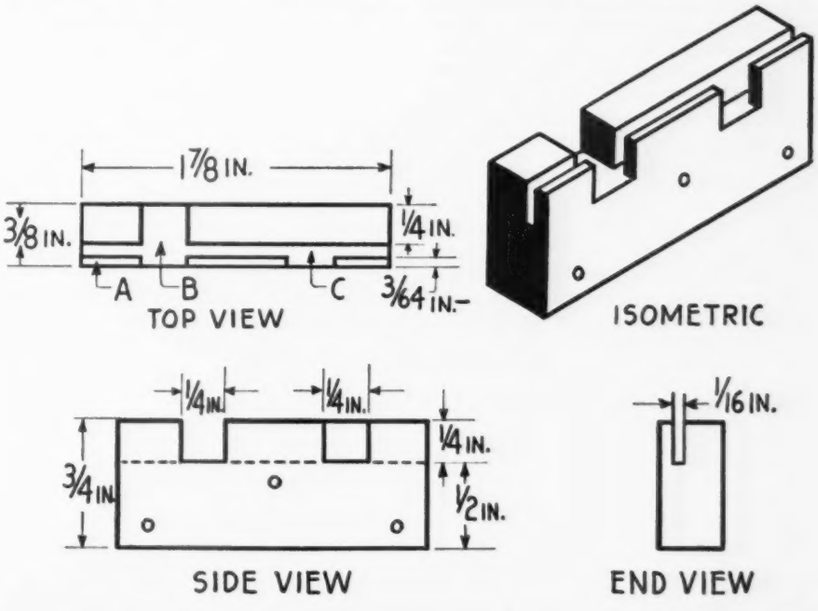
Intertype has some 25 machines at present installed and operating in 15 different printing plants. They have type matrices available or in process of manufacture for most of the type faces in general use today, plus some especially designed for the Fotosetter. There is no question but that they feel there will be an increasing place for their machine. On the other hand, they seem to have no plans to turn all of their manufacturing facilities over to building Fotosetters.

Labor Cost Comparable

Next, let us consider the cost of production as compared to lead type. As far as labor cost on the Fotosetter itself, we feel it is about comparable to our slug machines. Our operators set at about the same speed by either process. Naturally, there is more of a premium on accuracy as proofreading corrections are more difficult than in slug composition. We also feel that our darkroom and stripping operations should be costed at about the same rate as our regular makeup. However, the selling price of a particular job depends on the difficulty of makeup in film as compared to lead. Some jobs will cost somewhat less or about the same by either process, others will be prohibitive and should not be attempted on the Fotosetter. The probable necessity of author's alterations must also be considered.

Considers Other Machines

Next let us briefly consider the other phototypesetting machines which are known to be in various stages of development. As far as we have been able to



Block for Removing and Replacing Stop Pins from Intertype and Linotype Keyboard Cams—In time, an occasional stop pin extending crosswise of the keyboard cam on line-composing machines needs replacement. In punching out the old pin and applying the new one care must be taken to avoid closing in the width of the slot in the cam wheel, the slot being of just the right width to permit free movement of the cam when dropping upon the rubber roll or when the stop pin comes to rest against the tooth in the cam stop strip after it has made its revolution.

As shown in the accompanying not-to-scale diagram, R. D. Fisher, Machinist, with the Ada (Okla.) *Evening News*, has devised a block to facilitate removal of the old stop pin and to permit riveting both ends of the replacement pin without drawing in the two sides of the cam wheel.

The narrow plate *A* should be of such thickness to permit the cam to straddle it snugly. This plate is about 3/64 in. thick.

In use, the cam yoke is laid against the block so that the stop pin in the cam wheel is positioned centrally in slot *B* to permit driving out the old pin with a pin punch. When the new brass stop pin (some use escutcheon studs) has been inserted in the stop pin hole, the cam yoke is positioned so that the stop pin is opposite the opening in slot *C*. Preferably, the block may be laid upon an iron face plate or can be held between the jaws of a substantial bench vise. The block may be made from cold rolled steel. It won't be necessary to harden the working edges. Three steel rivets, each 1/8 in. diam., hold the block sections together.

determine these fall into three general categories:

(1.) *Those based on the Monotype system.* This typesetting method is at the foundation of the developments being attempted by Westover with Rotofoto in England, English Monotype and possibly ATF. The biggest problems to be overcome seem to be the fixed negative holder or matrix case and the camera speed which is controlled by the casting unit.

(2.)—*Those based on the circulating matrix principle.* In addition to Intertype, Mergenthaler has shown an experimental model called Linofilm. This used traditional mats with white characters on a black background and photographed a full line at a time. Further development is believed to be more or less at a standstill at present.

(3.)—*Machines using electronics.* William C. Huebner is supposedly working on a phototextype composing machine. No models have been shown.

The only electronic machine to be actually displayed has been developed by two French telephone engineers and is called the Photon. Immediate manufacture of 10 pilot machines is now planned. This equipment consists of a typewriter keyboard, which has controls to select the type from interchangeable disks containing 16 alphabets, setting from 5 to 36 pts., up to 42 picas wide with automatic justification. We understand the keyboard impulses proceed first to a memory-retaining unit, then to the disk which rotates rapidly before the camera. The big problems to be overcome in these four steps seem to us to be the difficulty of getting clear, distinct photography and properly fitted characters at high speed and adequate repair facilities in case of a breakdown. The combining of 16 alphabets may compensate on some classes of work, for the lack of completely interchangeable flexibility.

The Limiting Factor

However, let us bear in mind that whatever the process of setting type without the use of lead may be—whether it be Fotosetter or some other methods of phototypesetting, and including the various typewriter systems—all have the same two difinitely limiting factors. The first of these is the speed and ability of the operator, and the other is the fact that the ultimate product is either a piece of film or a piece of paper which cannot be changed, corrected or handled in most cases as easily as metal.

Able Operator Required

Many claims have been made about operator efficiency on substitute process equipment. Increased speed of production at much less cost is frequently promised as an answer to high composition costs. It seems increasingly apparent, however, that a well-set piece of composition requires an able operator to set and space it properly, regardless of the method used. As such individuals become more proficient their rate of pay goes up, no matter what machine they use.

All of these phototypesetting machines we have discussed seek to deliver a piece of film or a piece of photographic paper as their end product. Usually, we will be using film because eventually we expect to furnish the platemaker with a film positive or negative. Hence, the problems of film handling will be exactly those we have encountered with the Fotosetter.

Quality Alone Not Sufficient

In spite of the fact that the Fotosetter gives us type on film which is much cleaner and sharper than we can secure by reproduction proofs of the best lead form, quality alone will not sell the product. In the long run we feel that jobs go to some method of phototypesetting only if it offers that better quality at the same or less cost than our traditional methods.

Must Be Selective in Use of Equipment

If our machine costs are about the same by either process, we must concentrate on work which can be handled on film more economically, or at least as economically as in lead. We must immediately rule out jobs on which our clients are accustomed to make many corrections. We also feel that it would be useless to attempt jobs with complicated makeup in film.

Types of Plants Using Fotosetters

Some light can be shed by the kind of plants that are now using Fotosetters. There are several general lithographers, one lithographic label plant, several typographers, two boo printers, business form printing plants, a steel die engraver specializing in wedding invitations, the Army map service, and the Government Printing Office.

Types of Adaptable Composition

We have indicated previously that we feel that phototypesetting is useful for only certain kinds of printing jobs. Obviously, the product of any such machine will be used to replace reproduction proofs of type which now go before a camera. In our analysis we have come to the conclusion that the following types of composition are best adapted to phototypesetting.

The first of these can be summed up by the term "chunk" composition. Typography of this kind is used for labels, certain advertising broadsides, nomenclature for art work, map titles, and the like. Author's alterations on this type of composition are not usually extensive and can easily be made when needed even if a small block of type must be reset. Labels are particularly suited to phototypesetting because they frequently require small type. On the Fotosetter, 4, 5, and 6 pt. are just as clear and distinct under a glass as the original letters themselves.

Books make up the second general class of work suitable to this process in our opinion. We refer particularly to one column material although two column books are also practical. In fact, many kinds of one and two column composition can be economically produced by phototypesetting.

Blowups are also greatly improved by Fotosetter type. We refer to slide films, movie titles, display charts, and the like. Large charts particularly can be machine set in 24, 30 and 36 pt., and blown up photographically to any desired size without loss of detail, without any feathering of type edges, and on many jobs, at a substantial cost saving.

The business forms which are being handled on the Fotosetter usually are set as separate box heads, which in turn are either pasted or stripped into position.

PIA Exhibition Awards — Each of nine winners of the Printing Industry of America, Inc., 1952 Printers' and Lithographers' Self-Advertising Awards will be presented with a Benjamin Franklin Statuette copied from the model shown here. This model was loaned by the Poor Richard Club of Philadelphia. From left to right in the picture are: Major Judson R. Clayton, Manager, Poor Richard Club; Arthur Block, sr., Director and Chairman of the Club's Historical Committee and owner of the Statuette; W. W. Hicks, Philadelphia Branch Mgr., Miller Printing Machinery Co. accepting loan of the statuette for PIA; and Clarence W. Cranmer, Chairman of the Club's Library Committee. The Miller Printing Machinery Co. is sponsoring the Printers' and Lithographers' Self-Advertising Exhibition.

Letterpress, offset, gravure, silk screen and allied process printers, who use advertising to develop and sustain markets for the production of their plants, are eligible to enter self-advertising specimens in the exhibit. In addition to the nine statuettes, cash prizes totaling $3 thousand will be presented the winners. The Exhibition will be held at PIA's Annual Convention, October 12 to 18, Chase Hotel, St. Louis. Entry forms, containing the rules of the Exhibition, may be obtained from any of the local offices of Printing Industry of America, or its National Headquarters, 719 15th St., N. W., Washington 5, D. C., or Miller Printing Machinery Co., 1117 Reedsdale St., Pittsburg 33, Pa.

Blank rule forms can also be furnished, set with horizontal and vertical rules in one operation, giving exceedingly sharp reproduction.

Book publishing seems to offer a large potential. However, there must be considerable author cooperation to avoid manuscript changes after the book is in page form.

Accurate Advance Planning

In all of this work let us repeat that accurate advance planning is required. Layouts must be furnished to the operator to give spacing exactly as desired. Stripping changes can easily defeat the economic feasibility of phototypesetting.

Suitable Plate Desirable for Letterpress

The potential use of type on film in photoengraving has been barely started. Coast-wise it presents tremendous possibilities. The combination of a long wearing printing plate—such as Dowmetal—with careful etching may well result in a cost saving that would permit letterpress printers to regain some of the orders now lost to lithography for economic reasons.

Mr. Henry's Conclusions

In conclusion, we would like to give you a few opinions about phototypesetting which we have formed—for what they may be worth. We do not feel that any method of setting type by the use of a camera will ever put our conventional system of composition with metal type out of business. We feel that regardless of the improved quality, the market for phototypesetting will always remain relatively limited. In fact, our present analysis of the total commercial printing which may some day go to this kind of composition is not over 10 or 15%, unless some more efficient method of making complicated alterations is developed. Type on film—just as typewriting on paper—cannot be changed as easily as lead type. Author's alterations after film is stripped into page position are difficult and expensive, leading cannot be easily changed, jobs with complicated makeup—such as newspapers and the like—are not adapted to the process. However, we do see a definitely expanding use of typography by photography. This will come as more machines are available and as the industry becomes more familiar with the process.

Development to Come Through Typographic Plants

Perhaps it is a somewhat colored view on our part, but we feel that the development of this kind of typesetting will come most logically through typography plants rather than through installation of this equipment in printing organizations except for extremely large firms. In most cases machines in supply firms will be able to more efficiently produce the required phototypesetting for many printers, while a machine in most lithographic or other plants would not be an economical investment.

The problem becomes simply a matter of percentage of productive time. With most printing equipment, two-shift operation is normally necessary to sell in a competitive market. In a composing room, productivity must usually be maintained at at least 70% in order to make a profit. Securing sufficient work to keep even one phototypesetting machine busy on such a basis will not be possible in most printing plants.

It seems to us that there will be a definite place and an ever increasing place for phototypesetting in the Graphic Arts industry. As we become more familiar with the process, new uses will arise. We will gradually overcome our own natural ingrained resistance, our customers will learn which jobs can best be produced by this new equipment. Platemakers will become acquainted with its quality and labor-saving advantages. Quality alone will make these jobs which can be economically adapted to this method of production find their way in that direction.

Perhaps that lucky inventor we mentioned at the start will come along with a technique which will eliminate the handicaps inherent in the handling of film. Until he does, we don't plan to offer our lead typesetting machines for sale—except perhaps at the request of the sheriff.

Principles *of Huebner phototypesetting equipments discussed—Film or paper may be produced by chemical development or alternative dry process—Phototronic typewriter product said to be superior to carbon ribbon letters*

By WM. C. HUEBNER*

**Huebner Laboratories, Mamaroneck, N. Y. Paper delivered before conference of International Typographic Composition Assoc., New York, April 1952.*

THE introduction of phototype machines has started. They are being used in offset and gravure printing plants. We know of no typographic plants where photocomposed type-etched plates are being used on relief presses, eliminating hot metal type.

Eventually magnesium relief plate etching made from phototype films will be used. To what extent they will be adopted depends on their comparative cost with electrotyping and stereotyping.

Frankly, phototype will replace hot metal composition, but not in the immediate future. As long as hot metal type is required for electrotypes and stereotypes in supplying plates for relief presses now in use, hot metal type will continue to be specified.

My interest and activity in Phototextype composition goes back to the year 1910 when I designed a phototyesetting machine with a rotating flat disk carrying all the characters.

The estimated cost of development stopped us from proceeding with the work at that time because the Board of Directors of our Huebner-Bleistein Co. in 1912 convinced our stockholders that printing by offset would never attain practical use, and recommended abandoning the half million dollar demonstration plant in Buffalo, N. Y., which was done.

Naturally development work was delayed by the fact that our board of directors made a wrong decision on the advice of three competent relief printers.

After an expensive period of lawsuits which were started in 1920 and ended in 1932, we made a contract with Lanston Monotype Machine Co. to build our photomechanical platemaking equipment. Monotype's Kenneth P. Morse engineered the photomechanical platemaking equipment for manufacture by the Monotype Company. After that period, I again took up the matter of designing the Phototextype composing machine, and have been at it constantly since that time.

I have spent to date over $300 thousand on its development. A few months ago I sold the first Phototextype machine to a firm in Ohio which will use it on business forms.

We have given out little or no information concerning this Phototextype machine except that contained in the various patents that have been issued to me.

Initial Requirements

Here is an overall picture of what a true Phototextype composing machine should do to deliver the needed results for printing in all its branches, particularly in connection with the new systems on Onset Printing.

We decided that moving the master characters in front of a lens to select the individual characters needed to produce a word should not be done.

We believe that all characters should

be stationary to secure exact alignment on the base line which automatically assures the vertical alignment of each character; that only the flicking of a shutter should move to pass a beam of light and expose the character in its path to a target from which the exposure is made on film or paper.

Thus we make sure that no movement or vibration can ever prevent the image from arriving and maintaining its intended location and its sharpness during the exposure period. There are no parts to wear so precision alignment is always assured.

That means the optical system employed brings all the characters into one primary position in front of the lens. Therefore, any character, numeral or symbol is immediately ready to be exposed when its shutter is opened.

(2) Experience with photographic letters has taught us that we should start with a fairly large image and reduce it whenever we can to the point size needed because photographic reduction tends to sharpen the image, whereas enlargements tend to roughen it.

All letters, however carefully designed, have certain imperfections and such imperfections during the enlargements of the image are consequently emphasized.

So we add to the first requirement of stationary characters the second requirement—that of reduction of sizes.

(3) We are not confined to a galley length line. We need up to 19½ in. of line length for business forms and for full width of newspaper pages for *display type* and *advertisements*.

(4) Changes in *type face styles* should be done within a few moments of time and the machine should be able to use any type face that has ever been designed or that may be designed in the future.

(5) New type styles can then be obtained at a minimum of cost. In other words, the versatility of the machine must be complete.

(6) *Point Size Changes:* The machine will produce all needed point sizes for phototextyping and for display type. A change of lenses provides a range of reductions or enlargements needed to do the job.

We recognize a limit to reduction and enlargement of certain type designs to produce a balance of white or grey. Therefore, correction of lines or serifs are needed, depending on the extent of the enlargement or reduction.

(7) Each line of phototype is focused for point size, line length, set to measure, keyboarded, spaced, justified, and reread for error and corrected before release from the storage relay.

Recording the lighted image upon the film or paper is done during the time when the second line is keyboarded and recorded on an alternate storage relay. This system speeds up the output and keeps the speed in step with the speed of the operator since the machine is only one line behind the operator's speed.

Character Spacing

The alphabet, numerals and symbols are automatically selective for space width. Point spacing determines the average width and its spacing. Narrower than average and wider than average characters are automatically set for correct spacing. This is done, however, with a provision for leeway or elbow room if the operator is space conscious and is skillful in attaining his interpretation of correct spacing, particularly when setting display lines and advertisements.

Justification

The entire assembly line of characters and spaces is then condensed or lengthened to the exact line length for correct justification by a single move of the operator before the exposure of the line takes place.

Corrections

When a completed proof needs author or editor correction, these are made on a correction film. Wrong characters, words or paragraphs are then eliminated on the original film by opaquing, whereupon the correction film and the original film are pre-registered for double exposure to a fully corrected print or proof. Thus we avoid scissors and stickup of corrections which tend to be inaccurate and take time.

The Layout Guide

We employ a layout guide and composition indicator. This system originated in our early photocomposing machines. It guides the operator to compose exactly as needed for every format, box formation, column width, including the forming of vertical and horizontal lines to create box outlines if they are needed.

Scribing Lines

Where precision scribing is required, it is done on a separate scribing machine. We built one that does exacting work in the Standard Register Co. plant in Dayton, O., in connection with that firm's business forms.

Photographic Wet Chemicals

Photographic film or paper involving chemical development, stop baths, fixing, washing, drying time and chemical cost can be used as is now done in all phototype machines that we know of.

The above photochemical procedures can be replaced in the Phototextype machine by the Onset Smoke process which records the image on film or paper and is immediately dry and ready for use when the film or paper is removed from the machine. In this dry process, all prevailing chemical costs are done away with except the cost of material used for creating the smoke. Delays due to waiting for processing by wet photo chemical procedures and drying time are entirely eliminated.

Photronic Typewriter

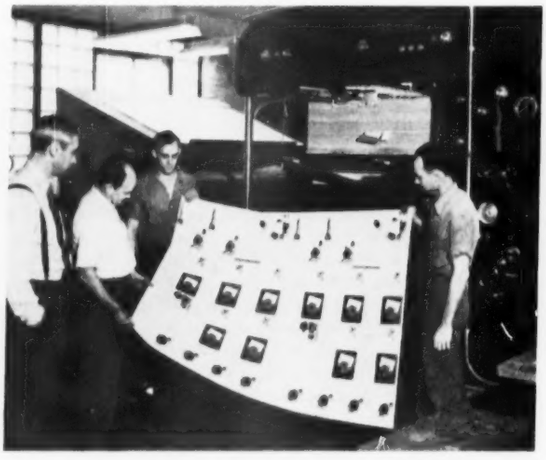
This is a new development. Its product is limited to a 9 in. width of sheet or web and the point size of characters is ranged between 5 pt. to 24 pt. size. The basic features, however, of the Phototextype composer are used with one exception. The Photronic typewriter will not employ photographic chemical procedures. The Onset images are photronically set upon the surface of the sheet and does all the recording.

The paper or film is removed from the machine ready for use. If two or more repeats are needed, the machine will reproduce the original keyboarding for as many reproductions as are needed, thus eliminating carbon copies. Each repeat is equivalent to the original.

The result is the highest quality of type characters, numerals and symbols, with a choice in selecting any type face available. A superior product to carbon ribbon letters permits reproduction by Photronic reproducers or recorders, again without photo wet chemicals.

When the proper time comes, typographic composition trade shops will have a fine opportunity to open new fields for more business, render better service, and obtain better earnings after taxes.

At the beginning of the year, The Huebner Co. was formed in Dayton, O. Kenneth P. Morse is president. This is the same Mr. Morse who engineered our photomechanical platemaking equipment for Monotype manufacture 20 years ago. The Huebner Co. purchased patents and patent applications on the new developments above described. Its function is to license others to make, build, sell and use the various machines and processes. Until license agreements have been made, machines will not be offered on the market.



Offset Installation in Kansas City—Recently installed in the plant of Modern Lithographers, Inc., Kansas City, Mo., is this Harris 50 in. by 72 in. two-color offset press. Shown examining a press sheet, from left to right, are Stephen S. Navran, Daniel B. Schnitz, Robert M. Hamilton and Howard W. Schnitz, all of Modern Lithographers.

Plastic Printing Plates

Technical treatise about the making of rubber, thermoplastic and thermosetting printing plates, together with discussion about aniline rotary printing presses

By **AXEL LUNDBYE***

**Research, Kable Printing Co., Mount Morris, Ill.*

III.

Printing Presses for Rubber Plates

Many presses used for printing with rubber plates are converted standard letterpress machines. However, in the last few years, quite a few special presses built especially to be used with rubber plates are on the market and are known as the so-called aniline presses. We will mention a few: The Champlain Heavy Duty Rotors Aniline-Anilox Press, manufactured by Champlain Co., Inc., Bloomfield, N. J.; Fred'k H. Levey Co., Philadelphia; Wolverine Paper Converting Machinery Corp., Detroit, and Babcock Printing Press Corp., Canton, O. The Wolverine machine is known as the Hydro-Printer.

The early development of aniline presses has been lost, but it is now an established fact that in 1890, Oskar Sperling, in Leipzig, Germany, developed his first aniline press. It was used mostly for printing wrapping paper. It took 15 years to go from one color to two colors. In 1905, Holweg & Co. in Strasbourg, Alsace-Lorraine, built the first two color aniline press. The main function of the press was to color paper or board and then imprint the second color on top of this coloring. The aniline press was extremely limited in these early days because there was no development to speak of in the aniline ink field. It was left to the Britisher to produce the first successful aniline inks. It took another 17 years to go from two to three colors. The first three color machine was demonstrated at the Leipzig Fair in 1922. That was the same year that the first aniline press was put into operation in the United States in Philadelphia by Thomas M. Royal Co. Most of these early presses were used by wrapper and label manufacturers.

Fig. 11.—Three Color Aniline Press, 31 in. web with unwind and rewind. Known as Wolverine Hydro-Printer. Built by Wolverine Paper Converting Machinery Corp., Detroit.

After these printing methods were introduced into the United States, it didn't take long for the Graphic Arts to recognize the possibilities, and in 1923 several of the presses were in operation.

Progress was much slower than anticipated, mostly due to the poor quality of ink. The pressman had to be not only a good pressman, but also a color expert, and he had to mix all his own inks. It was just as difficult in the early days to obtain a pressman who at the same time was a color matcher and an ink maker as it is today.

In these early days, all of the aniline presses were imported from Europe, but we now have several manufacturers who specialize in building aniline presses. Some of the names were mentioned above. See Figs. 11, 12, 13 and 14.

The aniline printing press is in itself, a very simple machine, very much like a letterpress, but only two inking rollers are required. Rubber plates are used as a

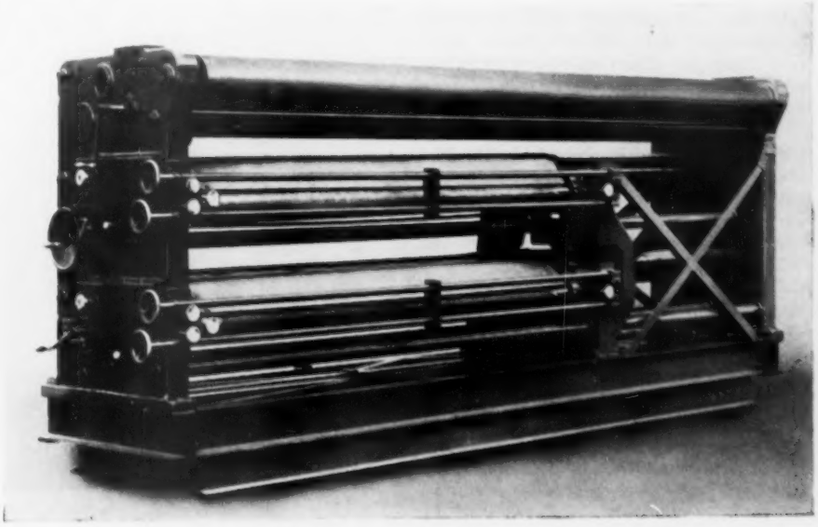


Fig. 12.—This is claimed to be the largest Aniline Printing Press in the world. Accepts 164 in. paper width. It's a two color press.

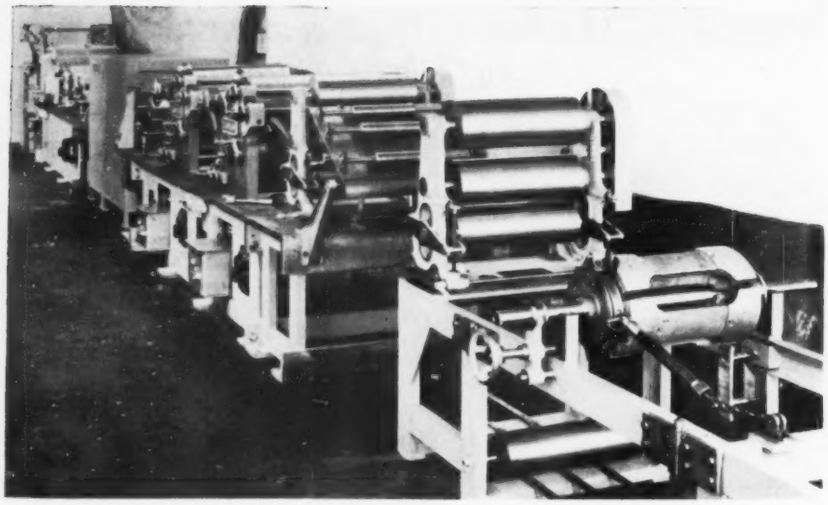


Fig. 13.—Model 20 in. Champlain Rotary Aniline Press for the printing and rotary blanking of a cardboard web. Units starting in the right hand foreground towards the delivery end of the press are as follows: Double roll stand with expanding type paper mandrel apparent, three-roll constant feed mechanism, angle roll stand for the side alignment of the web, secondary feed unit, two model 20 in. Champlain rotary score unit, rotary blanker and stacker delivery mechanism.

substitute for electrotype and stereotype plates. Impression is obtained by the web traveling between the plate cylinder and the impression cylinder, and again, it can't be repeated often enough, with only a kiss impression. That is to say, there is no pressure between the web and the plates. Therefore, rubber plates must be absolutely level.

The name aniline printing is misrepresented because the ink now used has nothing whatsoever to do with aniline dyes. Most ink manufacturers sell aniline inks, but they are in fact, only pigmented inks, soluble in alcohol or water. As stated several times, the aniline processes have limitations as far as printing fine screens are concerned, 85 line being the maximum in production today. However, we have seen 100, 116, and 120 line screens used, but only on small and experimental jobs.

What the aniline industry needs is a plate that will transfer the so-called aniline ink as good as the rubber, and at the same time carry a much finer screen and pigment per unit volume. When these two things are achieved, aniline printing will take its place among the other printing processes.

The design of aniline presses is different from the other presses due to the low viscosity of ink used, the rubber printing plate employed, and the accuracy necessary in the equipment to obtain the required kiss impression mandatory in printing with rubber plates.

The inking mechanism is very simple compared to letterpress mechanisms, consisting only of two inking rollers with a wiping action between the rollers. (See Fig. 15A.) This wiping action is the determining factor for the right amount of ink transferred to the plate. The inking mechanism is the heart of the aniline press, and several ways of metering the ink have been developed. Some manufacturers use the rotogravure method for transferring the ink from the fountain, that is to say, the ink roller has an intaglio design over the whole area or the whole face, with a pre-determined depth, and in this manner metering the right amount of ink to the plates.

Another method is to use a system equivalent to the one used on paper making machines for coating paper. (See Fig. 15C.)

Sometime ago, the Champlain Company came out with the Aniline-Anilox system, where the construction is approximately the same as for an aniline press. The rubber fountain roller transfers the ink from the fountain to the intaglio design in the metering roller, on which is a flexible doctor blade. When metered onto these intaglio design rollers the ink is deposited over the whole surface, both in the bottom of the intaglio design and the face of the roller.

The function of the doctor blade is to remove the ink from the outer surface, leaving the ink in the intaglio designs in a predetermined quantity which will be transferred to the plates on the cylinder. (See Fig. 15B.)

The setting of the doctor blades is of not too vital importance such as it is on a rotogravure press, because the doctor blade on the aniline press is of a semi-soft material, backed up with a steel backing blade. The claimed benefit with these methods is that the micrometer adjustment between the transfer roller and the inking roller can be eliminated, and still distribute the ink for proper printing. We must not get too deeply involved in printing presses and inks, because these articles deal mainly with the printing plates, and the equipment and the ink is another story. We might just give an academic specification for a good aniline press.

1. Should be well constructed, built very rugged and be sufficiently heavy to minimize vibration at high speed.
2. Press should be equipped with central throwoff system, hydraulic or pneumatic, to instantly throw all impression cylinders simultaneously.
3. All impression cylinders should be driven directly from one drive gear.
4. The ink roller should be in constant rotation while the press is stopped. The ink roller should be automatically set in motion when lifting the plate cylinder.
5. Ink roller and plate cylinder should be located as close to the frame as possible to prevent whipping.
6. All color units, plate cylinder, and impression cylinder should be well within the frame to minimize vibration.
7. Ink roller should be as large as practical for good ink distribution, not less than 6 in. diam.
8. Color unit should always be set on a slight angle to permit a slight wrap so as to maintain better registration.
9. The distance between the printing units should not be too great or too

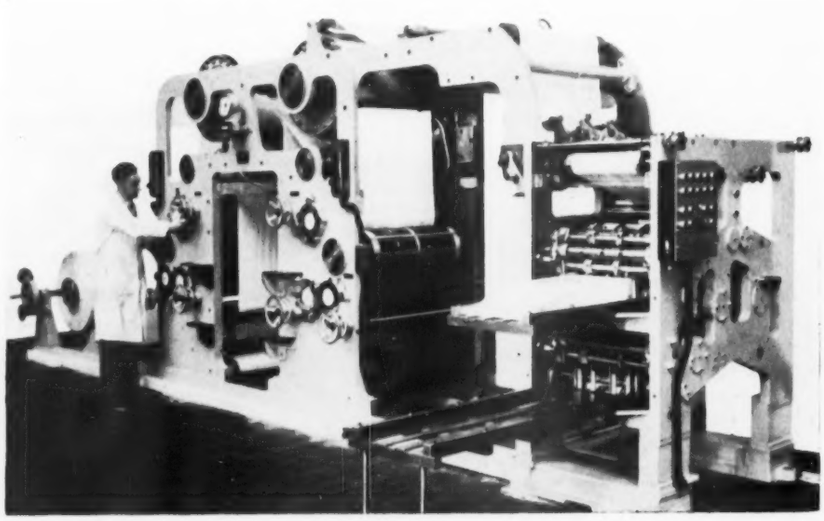


Fig. 14.—Rotary Perfecting Press and Folder. Max. web width, 35½ in. and adjustable cut off from 17½ in. to 47 in. This press is operated in Canada on book printing. Manufactured by Strachan & Henshaw, Ltd., Bristol, Eng.

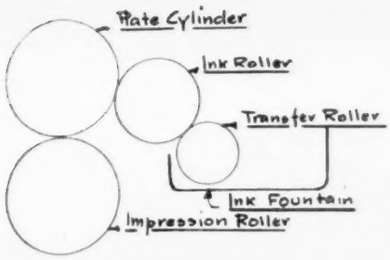


Fig. 15A.—Diagram shows the rotogravure method of transferring the aniline ink from the fountain or transfer roller to the rubber plate inking roller. The ink roller is engraved throughout its surface to a pre-determined depth to meter the right amount of ink to the plates.

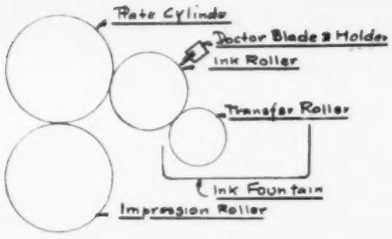


Fig. 15B.—Aniline-Anilox system of ink distribution. The function of the doctor blade is to remove ink from the celled outer surface of the ink roller, but leaving the ink in the intaglio design in a predetermined quantity which will be transferred to the rubber printing plates on the plate cylinder.

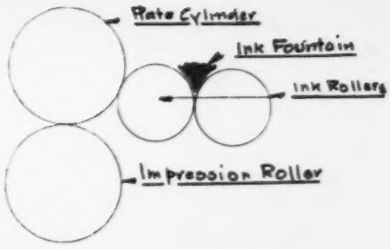


Fig. 15C.—Another method of applying aniline ink to the rubber printing plates is the system equivalent to the one employed on paper coating machines.

short. When too great, register trouble might occur.

10. Press should have positive register control, both circumferentially and sidewise, and should be operative when press is running.
11. All controls should be located in one bank, within easy reach of the press operator.
12. Automatic tension and flying paster (if press is used for folded signatures).
13. Adjustment between ink roller and plate cylinder should be micrometer type, except in the Anilox, where it is not necessary.
14. The press should be equipped with a definite locking device, simultaneously locking all color units.
15. Press throwoff impression arrangements should throw off in upward position to separate plate cylinder from ink roller, and impression cylinder.

Thermoplastic Printing Plates

Matrices used for producing thermoplastic printing plates — Vinylite — are identical to the ones used for molding rubber plates. The thermoplastic material used for this type of plate may be better understood when we compare them to blacklead. Blacklead, relatively speaking, is hard and dense when at room temperature and it becomes soft and pliable when heated. Therefore, blacklead can be considered having thermoplastic characteristics. When cooled down to room temperature, it again becomes hard. The material to be dealt with for thermoplastic printing plates are mainly of the vinyl chloride family, however, there are other types of thermoplastic material that have been investigated for producing plastic printing plates—Acrylic plastic and Styrene plastic—but so far the last two have not proved themselves in the printing industry. We shall deal here only with the vinyl plastic, or as it is known in the Graphic Arts, Vinylite.

Vinyl resin is formed by the copolymerization of vinyl chlorides and vinyl acetates. They are odorless and tasteless, resist moisture, dilute acid and dilute alkalies. And here the good points stop. They are readily attacked by many of the hydrocarbon solvents, and some of these solvents might be present in the ink used, in many of the type washes, and besides, when pressure and heat are applied to them, they lose their shape. From that, it can readily be seen that when such printing plates are used on high-speed, heat-setting presses, trouble might occur.

Little heat, in combination with a heavy printing pressure, is required before sufficient distortion takes place and makes them unfit for good printing. That is one of the major drawbacks for Vinylite printing plates. However, if they are used on printing presses where no heat is required for drying, they do an excellent job. With the price of a vinyl printing plate approximately one-half the cost of an equivalent electrotype, it can be understood that the printing industry is showing greater interest, and besides, the time it takes to produce a vinyl plate from the original to the finished printing plate is only 40 min. to 50 min., and a duplicate plate can be made in 20 min. to 25 min.

With these advantages, it can readily be seen that vinyl printing plates are taking hold. There are many printing companies in the United States who are experimenting with Vinylite printing plates, and many of them are printing, some of them even four color poster work. Besides that, there are several commercial electrotype companies that are making these plates for the trade, both for flat and curved plates.

One of the pioneers in this commercial field is Joseph Reilly of Reilly Electrotype Co. Most of Mr. Reilly's work has been in the newspaper field. We have seen some beautiful printing produced by the plastic-type plate, as Mr. Reilly calls it.

The Review and Herald Publishing Assoc., Washington, D. C., in the last few years has been experimenting with vinyl plates, and has had a fair share of success, both in black and white, and four color work, but so far only in flatbed presses. It is admitted that the Vinylite printing plate might have a long way to go yet before it will be recognized as an acceptable medium for printing high grade work. But we differ with that admission—only a little work is required.

The University Press of Cambridge, Mass., for the last several years has also been experimenting with Vinylite printing plates, but here again, mostly in black and white, and on flatbed presses. The Scribner Press, New York, N. Y., did some interesting work with thermoplastic plates as far back as 1923, and we understand it is still used to some extent by that company. We mention only a few companies who have done some of the pioneering work. It looks like the thermoplastic printing plate is finding its way into the Graphic Arts. By the money being spent both as to presses and material, it is here to stay.

The men interested in producing Vinylite plates might ask what equipment is needed. There are only three major pieces of equipment required: One hydraulic press having between 4 or 5 in. daylight opening. Presses as shown in Fig. 1 to 4 can be used. But let us repeat again, as for all other equipment in the Graphic Arts, especially where heat and pressure are involved, the equipment should be built sufficiently sturdy, rigid, and accurate. That holds true more so for the molding press. Both the upper and lower platens should be made to reach a temperature of 325 deg. The thermostatic control for these temperatures must be accurate, even more so than for the matrix molding press. Pressure should be able to go up to 1200 lbs. per sq. in. of plate area.

Some of the present stereotype and electrotype molding presses can be remodeled to give good results by installing proper heating and control equipment, but it must be remembered that platens must be parallel.

The second piece of equipment is a chilling press, and it should have approximately the same platen size as the molding press. Not much pressure is required for these presses, but the platen should be cooled either by circulation or cold water, or other means.

The third piece of equipment is a drying oven with a temperature range up to 200 deg. F. and arranged so that a good supply of circulating air can pass through. The interior of the oven should be arranged to accommodate a series of shallow loading trays, approximately 1 in. deep, in sufficient number to supply one day's molding materials.

The above three mentioned are the major pieces of equipment needed, and for auxiliary equipment, there should be a trimmer and beveling machine, a micrometer gauge for measuring thickness of the finished plate, a complete set

of bearers or side irons long enough to extend the whole depth of the platens, and several sheets of Bakelite material, approximately ⅛ in. thick, the same size as the press platen. These insulating sheets can be obtained from the Synthane Corporation, Oaks, Pa., or the Formica Insulation Co., New York, N. Y.

Molding a Vinylite Printing Plate

The material for molding the printing plate, as stated earlier, is altogether different than the face material on the matrix. Plate materials are thermoplastic. In other words, they soften by heat, and there are no definite curing cycles. The Vinylite material, when subjected to heat and pressure, will flow into the finest cavity in the matrix. The thickness of the plate is determined by the amount of the material load, and the thicknesses of the bearers. Never try to mold a Vinylite printing plate without bearers. When heat and pressure have been applied in the required amount, and at the predetermined time cycle, the whole assembly must be cooled before any attempt is made to separate the plate from the matrix, if a flat plate is required.

After the proper cooling cycle, the plate can be separated. The thermoplastic characteristics of the Vinylite will give a flat surface to the printing plate. Should it be a little warped, the plate can be straightened on a machine known as a leveling or correcting unit, which is not often required. See Fig. 16. If at a later time it is required to curve the plate, it can be done under strict temperature controls.

The material used for producing a Vinylite printing plate can be obtained both in granular and sheet form. In the Vinylite material there are several types obtainable. Information regarding them can be obtained from the Bakelite Corporation, Bloomfield, N. J., who will recommend the right material to be used for a specific job.

There are different techniques in molding for the different granulates, and combinations of granulate and sheet.

First, before discussing plate molding techniques for molding a printing plate from granular printing material, let us stress the importance of accurate control over the whole cycle, such as the preheating of the material in the oven, and during the molding procedure. A day's supply of granular Vinylite material is placed in the 1 in. shallow trays in the oven. The depth of the material should be approx. ⅝ in. to ¾ in. The oven is loaded with these trays, and the temperature should be kept between 150 deg. and 160 deg. F. This temperature is important. If it is too low, the granulate will not be properly conditioned. If it is too high, it will have a tendency to stick together. Besides the temperature, a sufficient air blast should circulate through the oven to facilitate removing the moisture liberated from the Vinylite during the heating. This conditioning cycle should be started at least 1½ hrs. before any molding is attempted, but it is safe to keep the Vinylite granulate in these ovens for from 10 hrs. to 12 hrs. without any danger of injuring the molding quality of the Vinylite. The matrix should be covered with a thin film of Aquadag water solution and allowed to dry. After drying, the matrix should be polished with a soft bristle brush. This graphite coating will facilitate removing the matrix after the molding cycle is completed. The platens, both top and bottom, should be heated to 280 deg. F. This temperature is important. The platens should be checked with a pyrometer at least once a week. If the platens are heated with steam, it is easier to keep them at even, uniform temperature than when heating with electric heating units. With electric heating units, usually the platen is hotter in the center.

Vinylite printing plates from granular material can be molded at 300 deg. F. if the temperature is even throughout the platen, or at least even over the area of the platen in contact with the plate, but a temperature of 280 deg. is preferred.

As has been stated, when molding Vinylite plates, bearers or side irons are mandatory, and can be computed as indicated in Table V.

TABLE V.

Matrix floor	0.110 in.
Plate thickness required	0.170 in.
*Deflection in Platens	0.003 in.
	0.283 in.

*Must be determined for each press.

As shown in Table V, we called for 0.170 in. plate thickness. Actually, the finished plate is only to be 0.152 in. The 0.018 in. is left for finishing.

Now the matrix is placed on the removable apron on the platen, and sufficient material is withdrawn from the furnace and extended evenly over the matrix. The material should be weighed out at approx. 1 oz. for 6 sq. in. An experienced operator can easily guess the exact amount required. For an inexperienced man, weighing is the safest way.

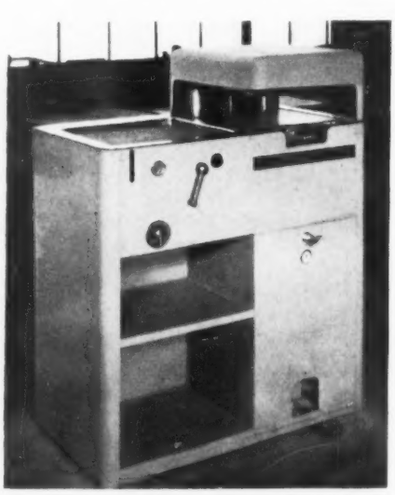


Fig. 16.—Leveling Unit by Lake Erie Engineering Corp. To level a plate, first heat plate in hot water bath approx. 150 deg. to 160 deg. F. Then close the unit, using a light pressure approx. 10 to 15 lb./sq. in. This operation is much like that of bumping electrotypes.

An example to figure out the right amount for a certain size plate assumed to be 0.170 in. thick is as follows: 10 in. by 7 in. equivalent to 70 sq. in. We established before that 1 oz. will cover 6 sq. in. Therefore, 6 divided by 70 will give approx. 11½ oz. For platens having larger open areas, the material requirement might be as low as 15% less.

After the material is spread evenly over the matrix, it is a good policy to build up the four corners to approximately ½ in. thickness. Should the plate have a large solid area, more material than given above might be required to get a perfect fill-in.

After the matrix is loaded, the bearers or side irons are placed on the apron. They should be at least 2 in. from the side of the matrix and should run from front to back of platen. This 2 in. distance from the matrix and bearers is to allow for flash when the plate is molded. Then the whole assembly should be covered with one of the ⅛ in. thick insulating sheets, and it should extend over the bearers. If it does not, the thickness of the sheet must be taken into consideration when the thickness of the bearers is calculated.

Now the removable apron is moved in under the platen. Remember, it should be placed as close as possible to the center of the ram to eliminate any twisting action during the molding operation.

A slight pressure is now applied at between 50 lbs. and 60 lbs. per sq. in. It should take about 2 min. to get up to this pressure. This is what is known as the pre-heating cycle. It is during this interval that the material becomes hot and plastic. The press can now be closed at about 1000 lbs. to 1200 lbs. per sq. in., again figuring the printing area of the matrix. Assuming we have a printing area of 12 in. by 15 in., equivalent to 180 sq. in., then the pressure should be between 90 T. and 108 T. These pressures should never be exceeded on this size or type of plate. The pressure should be held until the bearers are tight, which will indicate that the material has flowed to the required thickness, and all the cavity has been filled out. The time will be between 2 or 3 min. if we started with the right amount of Vinylite.

After the above time has passed, the matrix, plate, bearers, and insulating sheet are moved as a unit to the cooling press. Here a press as indicated in Fig. 3 would be used. Be sure that the surfaces on the cooling press have an even temperature all over, then close the press, and in about 1 min. to 2 min. the Vinylite solidifies. The time might differ a little, depending on the coolness of the platens.

Next, separate the plate from the matrix. The best way is to use a heavy spatula and insert it along the edges. Applying a twisting and lifting action the plate should come out fairly easily if the matrix has been properly treated with Aquadag solution. The plate is now ready for trimming, shaving and routing.

(To Be Continued)

Equipment & Supplies

If you wish additional information concerning equipment, supplies and/or technical literature, please make your request to PRINTING EQUIPMENT *Engineer*, 1276 West Third St., Cleveland 13, Ohio.

Reducing Photocopy Camera

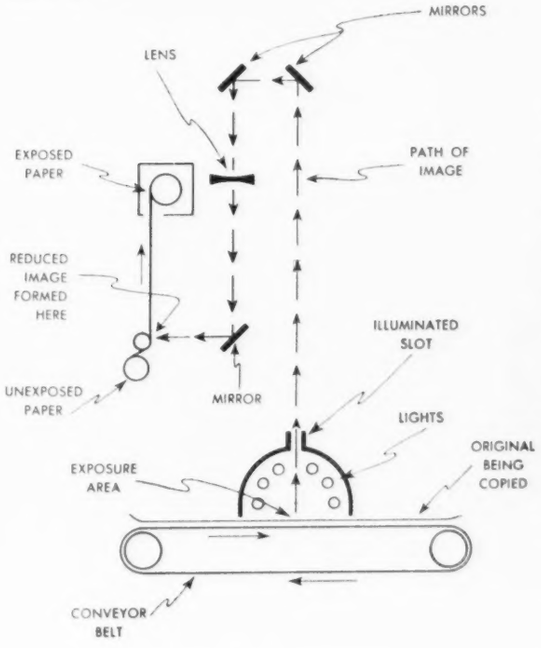
THE Neo-Flow Camera is designed for producing reduced scale photocopies of any original which is printed, written or drawn on paper, vellum, cloth or other material, according to Peerless Photo Products, Inc. The machine will reduce copy in a range of ratios up to 6:1 and produces right-reading or mirro-image copies on either sensitized paper or film. Up to five different reductions may be supplied in any one camera. It will accommodate originals up to 42 in. wide and of any length.

It is claimed that the Peerless Neo-Flow Camera will reduce copy in a range of ratios up to 6:1 and produces right-reading or mirro-image copies on either sensitized paper or film.

In operation, the original to be copied is fed into the machine on a continuously moving belt at a speed of 12½ f.p.m. As it reaches an illuminated slot which determines the exposing area, sensitized paper or film starts automatically to move synchronously, and receives the image of the original by means of a lens and mirror optical arrangement. When the entire original has passed through the exposure area, the photographic paper or film stops until another original is fed into the machine.

An automatic daylight processing unit comprising developing, quickstop, fixing and washing tanks is furnished with the camera. The exposed paper or film is run continuously through the four-tank unit into a dryer and then rewound on a spool or cut to size.

Floor space for the machine is approx. 5 ft. sq.; height is 8 ft. 6 in. Power is supplied by a ¼ h.p. electric motor and maximum power requirement for motor and lights is 1000 w. Please mention PEE No. 398 when requesting additional information.



Schematic diagrammatic side view of optical system utilized in Peerless Neo-Flow Camera for reproducing in selected reduced size photocopies of original drawings. Originals up to 42 in. wide and of any length can be accommodated in the machine. It will be noted that through an optical system the image is deflected by means of a series of 45 deg. angle mirrors with a lens interposed between two of the mirrors to secure desired reproduction size. Once the mechanism has been set the action is automatic. The Neo-Flow Camera, it is said, will reduce in a range of ratios up to 6:1 (right-reading or mirro-image copies) on either sensitized paper or film.

Montgomery Catalog

PARTS and accessories for Intertype and Linotype line composing machines are included in the 24 page catalog available from Montgomery Co., Inc. Typical of the items described and illustrated in the firm's latest catalog are mold disks, liners, second elevator and distributor box bars, delivery slide finger, magazines, operator's chair, adjustable and advertising figure molds, Margach Automatic Metal Feeder, etc. When requesting a copy of this catalog from *Printing Equipment Engineer*, please refer to it as PEE No. 396.

Aqua-Sorber Dehumidifier — **The Aqua - Sorber Dehumidifier designed for dehumidifying working areas is equipped with an automatic control activated by the moisture content of the atmosphere, according to Walton Laboratories. The unit is also designed with a hose connection accessible for permanent automatic water removal through drain piping. It is equipped with a ⅓ h.p. motor. When writing for more information on the Aqua-Sorber, please mention PEE No. 399.**

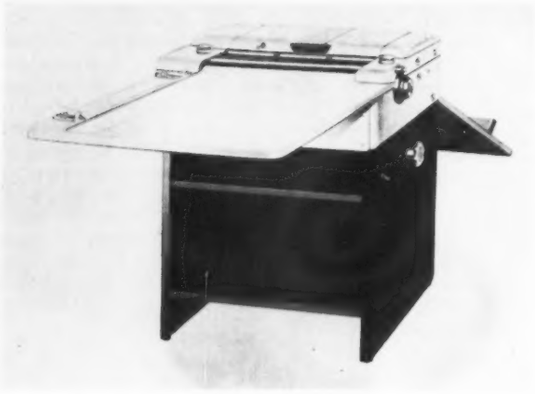
Plate Processing Towels

KIMBERLY-CLARK Corp. has announced that its disposable plate processing towels for offset platemakers are now available in a package known as Litho Wipes. The package consists of 2400 towels, with 300 towels to the bundle and eight bundles to the container. The towels may be used for washing out deep-etch plates with alcohol, washing out gummed plates with Lithotine or turpentine, applying and wiping down thin asphaltum, applying deep-etch lacquer, applying developing ink or albumin on deep-etch plates and cleaning glass sides of vacuum printing frames.

Litho Wipes are described by the sponsor as soft, white and absorbent. They are made from chemically neutral cellulose fibers, felted and embossed with ribs to pick up finely divided metals and compounds. The towels measure 13⅓ in. by 16⅓ in. More information is available by mentioning PEE No. 397 in your request.

Truck Catalog

THE Lewis-Shepard Model J Electric Fork Truck, designed for smaller operations in materials movement, is the subject of a 12 page bulletin issued by Lewis-Shepard Products, Inc. The Model J truck is said to be of usefulness where lack of space and limited floor load capacity pose special problems. Copies of the bulletin are available by writing *Printing Equipment Engineer* and mentioning PEE No. 388.



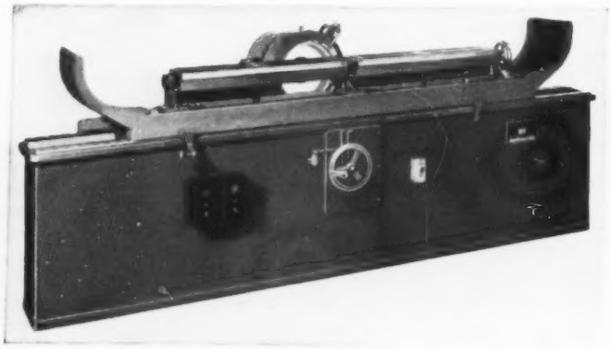
The Rosback Model 22 Special rotary slot perforator includes several improvements over the former model machine. Max. sheet size has been increased, permitting a sheet up to 25 in. wide to be accommodated.

Rotary Slot Perforator

A ROTARY slot perforator, to be known as the Model 22 Special, has been announced by F. P. Rosback Co. Though similar in appearance to the Rosbac Model 22 machine according to the sponsor, the Model 22 Special has been increased in overall width to accommodate a sheet up to 25 in. wide. It has also been designed with a variable speed control with an on-and-off switch.

A feature of the machine is an automatic indicator light which signals to the operator when the strike gate is in raised or feeding position. The indicator light operates only when the unit is set for strike or skip perforating. Sponsor states that this device shows exactly when to feed the sheet.

As on the Model 22 perforator, standard slot perforating, knife cut perforating, scoring or creasing can be done on the Model 22 Special by use of proper type heads. All type heads used on the former model can also be used on the new machine. When requesting further details, please mention PEE No. 394 in your letter to *Printing Equipment Engineer*.



The NL Medium Duty Knife Grinder designed for the care of paper cutter knives and developed by Samuel C. Rogers & Co.

Knife Grinder

SAMUEL C. Rogers & Co. has announced a medium duty knife grinder designed for the care of paper cutter knives. Known as the NL Grinder, the automatic all steel welded cabinet base machine incorporates an electric table drive including Rogers control switches and $1\frac{1}{2}$ h.p. reversing motor.

Sponsor states that grinding pressures are absorbed by the heavy base through the combination of flat and angled V-ways. It also claimed that these V-ways are self-aligning. Standard equipment includes a 3 h.p. heavy duty ball bearing grinding head motor. The 14 in. diam. segmental type wheel is said to move to the work automatically in desired increments.

The knife bar is of the box type with two faces to handle either thick or thin knives. A quick set-up device is also available. The Rogers company claims that any angle can be set for bevel grinding. The NL Ginder is available in six standard sizes to handle knives up to 60 in., 66 in., 72 in., 90 in., 102 in. and 110 in. length. Its weight ranges from 1800 to 3500 lbs. Please mention PEE No. 392 when requesting further details.

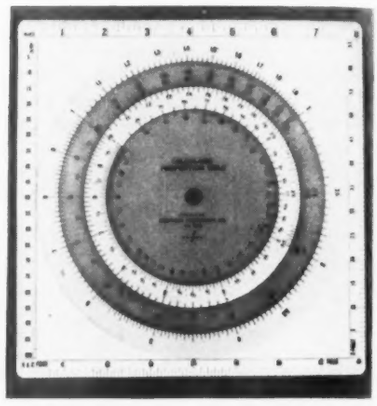
Silk Screen Films

ULANO Products Co. has prepared two eight page bulletins describing the company's Plasti-Cut Water Soluble Knife Cut Film and Super Foto Film for photographic silk screens. According to the sponsor, the Plasti-Cut water soluble film does not shrink or expand, cuts and peels quickly and stands up on long runs of all modern screen process colors. This film uses a water type adherer in the processing which is said to be non-inflammable. As explained in the bulletin, the film is designed in combination with the adhering liquid to dissolve slowly during the processing permitting the adhering of the entire piece of film at one time. Both bulletins include step-by-step instructions for processing each film. Another part of the bulletins contain helpful suggestions as outlined by the Ulano company. Please mention PEE No. 387 when requesting copies of this literature.

Proportion Rule

THE Calculaide proportion rule, announced by American Hydromath Corp., is designed for solving problems involving ratio and proportion, reduction and enlargement, and type sizes. The instrument incorporates a circular slide rule and is provided with both inch and pica scales along its edges.

A pair of circular scales on the rule are used in solving reduction and enlargement problems for photoengraving, offset, gravure, layout and photostat work



These scales, which are graduated from 1 in. to 30 in., are divided into fractions.

A second pair of scales, 19 in. long and concentric with the first pair, but divided into decimals, provides the circular slide rule. It is used for solving problems in multiplication, division and percentage, as well as ratio and proportion, at a single setting. The proportion rule also provides the user with eight scales along the edges showing inches, picas and the following type sizes: agate, 5, 6, 7, 8, 9, 10, 11 and 12 pt.

The Calculaide instrument measures $8\frac{1}{8}$ in. square. It is made of non-inflammable, non-warping Vinylite plastic. Markings are indelibly laminated into the body of the plastic. Sponsor states it is unaffected by moisture, perspiration or ink, and can be cleaned with a damp cloth. If additional information is desired, please mention PEE No. 386 when writing *Printing Equipment Engineer*.

Reinforced Shelving

EQUIPTO, Div. of Aurora Equipment Co., has announced a type of shelving designed to hold up to 2000 lbs. on each shelf. Known as Iron-Grip Shelving, the reinforced sides and center of the shelves are constructed of 1 in. by 1 in. carbon angle irons, $\frac{1}{8}$ in. thick. Front and rear of the shelves have U-shaped reinforcing channels. In assembling the shelving, a stud is slipped into a hole in the shelf and then into a keyhole in the upright. The shelf is pressed down to complete the assembly. Iron-Grip shelving is adjustable on $1\frac{1}{2}$ in. centers. Dividers, drawers, backs and sides are available in all sizes. More information is available by mentioning PEE No. 393 in your request.

Rotary Roll Paper Clamp

THE Elwell-Parker Electric Co. has announced publication of a new bulletin covering the application and operation of its rotary roll paper clamp, a fork truck attachment. It is claimed that this clamp permits unloading a box car in less than 1 hr. and can save up to 30 per cent warehouse space by closer tiering. The company reports paper damage can be cut to one-half of 1 per cent of the rolls handled with the attachment. The roll clamp grips the roll in a pair of hydraulically powered jaws and permits picking up rolls in either horizontal or vertical positions. The operation of the roll clamp is described in detail in the bulletin and how it may be adapted to various phases of the paper and boxboard industry is shown. Information on design and safety features of the device are also included. Copies are available by mentioning PEE No. 391 in your request.

Electric Fork Truck

THE SpaceMaster Electric Fork Truck, recently announced by Lewis-Shepard Products, is designed with a Master Control lever for controlling speed, direction and braking. The operator is given a choice of four speeds forward or reverse and through the use of magnetic controls, the Master Controller can be placed into full speed forward resulting in an automatically timed acceleration through each speed.

Sponsor claims the truck will go from

The SpaceMaster Electric Fork Truck designed with a single lever for controlling speed, direction and braking.

any speed forward to any speed reverse by a single movement of the Master Control lever. Deceleration forward through neutral and into acceleration reverse are controlled by magnetic timing.

The Dynamic Braking feature of the truck provides decelerating and stopping the truck without the use of the truck's mechanical brake. This type of braking is also accomplished through use of the Master Controller. More information may be obtained on this truck model by mentioning PEE No. 383 in your request.

Automatic Oiler—According to Leiman Bros., Inc., the Model E-113 Automatic Oiler is designed to feed measured amounts of oil to Leiman Air Pumps for the lubrication of wings and vanes which in turn will deliver oil-free air for printing and other operations requiring low oil vapor content. Sponsor states the automatic oiler feeds any oil from SAE 10 to SAE 70. Rate of feed is adjustable from 1 drop in 4 min. to 4 drops in 1 min. The oiler is equipped with a transparent visual reservoir which holds up to 3 oz. It feeds only when the pump is running. The device is actuated by a draft of air passing through it It may also be used on a vacuum pump or on inlet of a pressure pump. A heat insulator is said to prevent the heat of the pump from warming and thinning the oil in glass reservoir. More information may be obtained by mentioning PEE No. 389 in your request.

Shockless Static Neutralizer

WHAT is claimed to be a shockless static neutralizer designed for rotary letterpresses, offset presses and rotogravure presses in the larger sizes, is illustrated and described in a four page bulletin issued by Chapman Electric Neutralizer Co. It is also designed for ruling machines, varnishing machines, folders, etc.

Known as the Model S-51, the press attachment has extended points of suitable length to project into confined spaces. The extended point assemblies are movable along the tubular body of the bar and can be moved and locked in position to avoid obstructions.

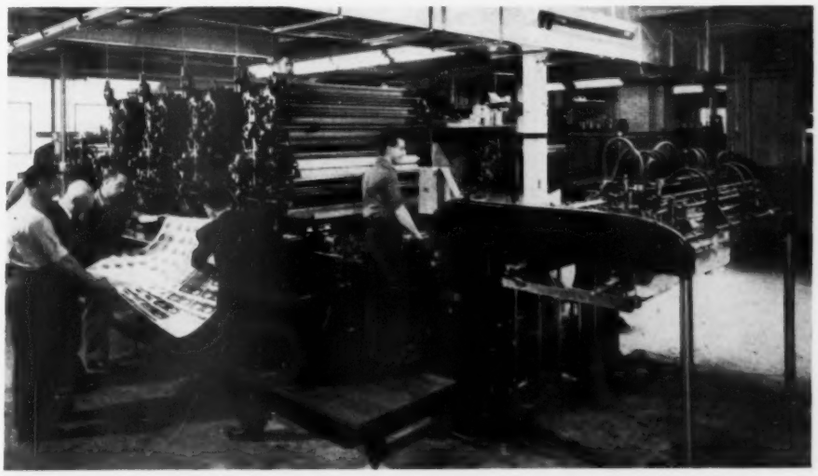
According to the company, the connecting cables of the S-51 Chapman neutralizer are coaxial type and dead to touch. Sponsor claims there is no chance for shock or spark when cable is disconnected. Cables can be connected to either end of bar. The transformer used with the S-51 is Chapman built, Type HS. The primary coil can be wound for any a.c. single phase voltage up to 440 v., any frequency 25 to 60 cy. The short circuit current from the secondary side is limited to .01 amps. Copies of this bulletin are available by mentioning PEE No. 395 in your request.

Typecast Cuts Catalog

TYPECAST cuts, borders and ornaments, cast from hard foundry metal, are illustrated in Catalog No. 8 issued by Sterling Type Foundry. The assortment of foundry metal cuts in various sizes are designed for filling automotive, fraternal, commercial and industrial requirements. A section on United States service insignias is also included in the 16 page catalog. Please mention PEE No. 402 when requesting a copy from *Printing Equipment Engineer*.

Multi-metal File

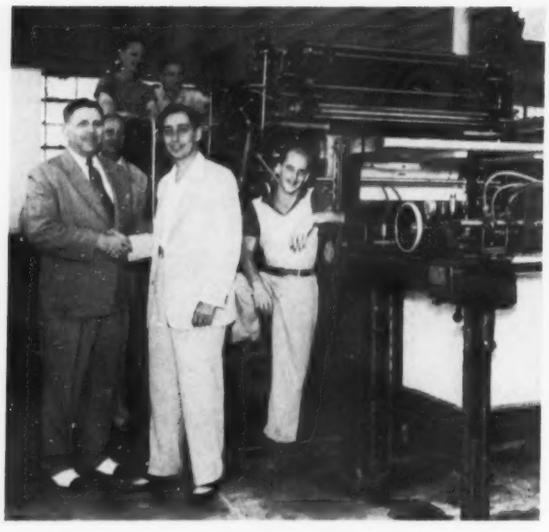
A FILE designed for cutting aluminum, brass, copper, iron and steel, and other metals has been announced by Henry Disston & Sons, Inc. The files are said to have special tooth shapes and spacing so that the same tool will cut a variety of metals. Sides of the file are double-cut, while the edges are single-cut. Designated the Multi-metal file, it is available 10, 12 and 14 in. lengths. If more information is desired, please mention PEE No. 403 in your request.



Canadian Firm Installs Four-Color Press—What is claimed to be the first four-color offset press in Eastern Canada was recently installed by Montreal Lithographing Co., Ltd., Montreal. To announce the addition to its facilities, the firm produced a four-color brochure entitled A New Giant To Serve You. In addition to the 42 in. by 58 in. Harris four-color press [shown above], the company also recently installed a 22 in. by 34 in. Harris two-color offset press. Inspecting the initial sheet run at the press are, from left to right: Herbert Miller, Superintendent; J. Walter C. Taylor, President; Harry Jennings, Pressman; H. E. Stewart, Harris-Seybold Montreal Representative; Gordon Quinn, Second Pressman; and Louis Melonja, Feeder.

Miller Holds Sales Conference—Sales representatives and agents of the Miller Printing Machinery Co., shown at a recent conference where sales policy and engineering features of the recently acquired E.B.CO Offset Press were discussed by Miller and Electric Boat Co. officials at the Miller plant in Pittsburgh.

TV Program on News Ink—The importance of newspaper ink to modern civilization was described by Ralph C. Persons in a recently televised program *Meet the Boss*. Persons is Exec. Vice Pres. and Director of Sun Chemical Corp. and General Mgr. of Geo. H. Morrill Co., Div. of Sun Chemical Corp. While Bill Cunningham (left), Boston *Herald-Traveler* newspaperman, interviewed Persons (right), parts of a film were shown of Morrill's plant in Clearing, Ill., and interior scenes depicting the manufacture of printing ink.



Two-Color Offset Press—Identified in this illustration are: In foreground at right, owner of the Miami (Fla.) Mail-Rite Co. At left is ATF's Atlanta Branch Mgr. Directly behind them is Bill Grizzard, new ATF Miami representative. At left on press platform is Joe Fitzpatrick, installation supervisor and to his right is Pressman Frank Costello. Pressman Jack Prough stands beside Mr. Weiss. The ATF-Mann Offset Press takes max. sheet size of 25½ in. by 36½ in.

Photoguide Instrument

THE John Warner Co. has issued a four page bulletin in which it describes the Photoguide, an instrument used in the planning and preparation of art, type and photos for reproduction. Sponsor states the Photoguide may be used in squaring art and photos, four-side cropping, and centering and aligning subject material in artwork or type proofs. Combining a T-square, triangle and ruler, the instrument also has uses in checking engravers' proofs for size and [illegible] aligning reproduction proofs or copy for offset and gravure, and measuring two sides of ads and proofs.

The Photoguide is a square 8½ in. by 11 in. sheet of Eastman matte acetate, available calibrated in inches or picas. In use, it is placed on top of the photograph or drawing. After determining the particular size or desired proportion, the subject is squared by adjusting the Photoguide so that one of its vertical lines exactly lines up with a vertical part of the copy.

The Photoguide is held firmly on the photo and, with a needle or any sharp point, the acetate is pierced at the edge of the print on the lines selected for cropping. These lines are transferred to the copy as dots on which crop marks may then be added at the edges of the copy. Additional details may be obtained by mentioning PEE No. 384 in your request.

Rubber Plate Bulletin

DESCRIPTIONS of and directions for using various rubber printing plate sealing and bonding cements and tapes are listed in a four page bulletin prepared by Mosstype Materials, Inc., an affiliate of Mosstype Corporation. Included in the bulletin are hints on use of plate mounting cements and data concerning the appropriate solvents for each cement. A copy may be obtained on request by writing *Printing Equipment Engineer*, and mentioning PEE No. 400.

Tachometer Bulletin

METRON Instrument Co. has issued an informative four page bulletin in which is described the principle of operation of Metron hand, portable and fixed installation tachometers. Designated Technical Data Sheet No. T4, it contains simplified circuit diagrams and illustrations of various Metron tachometer models. The basic circuit and its advantages are described in detail. When writing for a copy of this bulletin, please mention PEE No. 385 in your request.

Wood 40 Page Press

A PROGRAM of expansion initiated by Charles D. Dingman, Managing Director and Editor, which includes a new building and modern newspaper printing equipment, is being completed by the Stratford (Ont.) Beacon-Herald.

This newspaper has outgrown its old quarters and a new building, equipped with modern facilities and machinery throughout, was necessary to meet the present circulation needs and keep pace with future expansion.

Major changes in the *Beacon-Herald* pressroom consists of a new Wood 40 page Cosmopolitan Press equipped with the Intraserter which provides 2-page jumps on collect runs. Facilities for printing r.o.p. color and other improvements include installation of Wood stereotype equipment which will give the newspaper one of the most modern plants in Canada.

Dick Labeler Bulletin

THE Dick Labeler, a hand operated machine designed for attaching address labels to newspapers, magazines, catalogs, envelopes, direct mail pieces, etc., is illustrated and described in a two-color, two-page bulletin prepared by The Dick Mailer. According to the sponsor, the machine will address pieces at speeds up to 10,000 per hr. A description of the labeler may be found in the June 1952 issue of *Printing Equipment Engineer*. Copies of the bulletin are available by mentioning PEE No. 355 in your request.

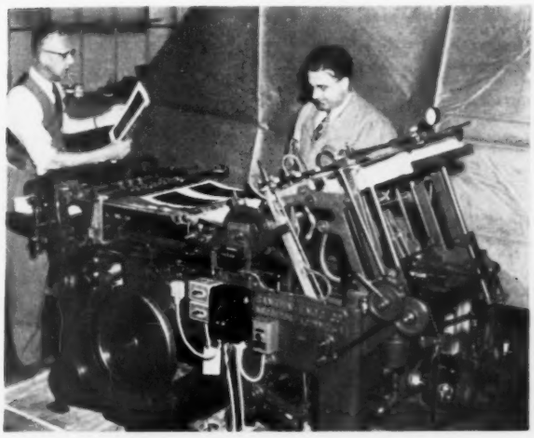
President A. T. Enos, jr.," of Stearns & Beale, New York lithographic printers is shown standing by the press line in his plant. All of the offset machines have been equipped with the Baldwin Water Level.

Baldwin Water Level in Smaller Size

THE Baldwin Water Level, announces William Gegenheimer Co., is now made in a 2 gal. size. This device is intended to be used in connection with water dampening mechanism on offset printing presses. Originally, the Baldwin Water Level was built in 5 gal. size for presses ranging from 35 in. by 45 in. through the 52 in. by 76 in. size.

The new 2 gal. size bottle is made of white unbreakable plastic. It is designed for presses ranging from 14 in. by 20 in. through 22 in. by 34 in. Sponsor states installation on any Harris, ATF, E.B.Co., or Miehle offset press within this range can be accomplished in a few minutes.

Once in position, it is out of the operator's way and may be removed quickly for filling. Water cannot be spilled because of the specially designed valve which shuts off the flow as soon as the bottle is raised from its fixture. If you would like to have further information about the Baldwin Water Level, please mention PEE No. 401 in your inquiry.



Press for French Equatorial Africa—John F. Banthin (left) President of the Banthin Engineering Co., examines a sheet from a test run on a Banthin cylinder press to be shipped to Africa where it will be used by Baptist missionaries to print religious material. Watching press operate is a Banthin foreman, Larry De Libro. Press will be delivered to Rev. Eugene Rosenau who represents the Mid-Missions General Council of Cooperating Baptist Missions of North America. Indicating how highly the press will be prized by its owners, it will be dedicated as a memorial to the wife of a missionary, Mrs. Fern Hamman, who died last year. President Banthin states his company's presses are in use in India, Africa, So. America, Mexico, Cuba and the Philippines, as well as in the United States and Canada.

Coated Offset Paper

COATED offset paper is now available with a strong, durable base that will not tear out at the grippers or split on the blanket, according to Bill Fulton, Production Mgr. of Richard H. Brady Co., Inc., advertising agency of Stevens Point, Wis. Fulton's remarks are published in a recent issue of *Kimfacts*, a service bulletin published by Kimberly-Clark Corp. for distributors of coated printing papers.

Fulton also stated that a new method securely bonds coating material to prevent picking on the press. He said coating absorbency is designed to hold inks on the surface and provide richer blacks and sharper halftones.

Fulton points out: "While it is generally true that uncoated papers can be printed faster, it's equally true that many jobs on coated offset papers can be run just as fast, with speeds in the 4000 to 5000 i.p.h. bracket." Printing speed, he adds, is affected by many variables, including type of press, weight of paper, ink coverage, accuracy of register and general layout of the printed piece. If you're requesting a copy of this bulletin, please refer to it as PEE No. 404.

G-E Tachometer Kits

TACHOMETER kits, containing the components necessary to provide permanent records of machine performance at a central location, have been announced by the General Electric Co.'s Meter and Instrument Dept. The instruments in the kit may be used on web-fed presses. According to G-E, the central location of the kits' recording equipment eliminates time-consuming production-line trips by supervisory personnel, permitting up-to-the-minute checks of operating equipment.

Sponsor also states the permanent recording feature aids preventive maintenance scheduling, and prevents excessive manufacturing losses by automatically shutting down machinery in case of breakdowns.

Four kits are available. A typical installation would include a d.c. tachometer generator, tachometer indicator, switchboard-type tachometer recorder, and a web-break detector. Audible or visual alarm systems are optional accessories. A four-page bulletin in which the tachometer kits are illustrated and described, is available from G-E. When requesting additional information, please mention PEE No. 390.

The G-E Tachometer Kit includes (from left to right) a tachometer generator, speed recorder and tachometer indicator. A mechanical web-break detector is shown in the foreground.

Oldest Challenge Cutter—A. W. Pickering is shown here with what is believed to be the oldest Challenge Lever Paper Cutter in existence. Mr. Pickering recently celebrated his 34th anniversary as owner and operator of the Black Earth (Wis.) *Dane County News* which was founded in 1868. J. Edgar Lee, President of the Challenge Machinery Co., stated that this cutter, which bears Serial No. 3, was built in 1887 and was originally shipped to the Union Type Founders, Chicago. There is no record of cutters with serial numbers 1 and 2, according to the Challenge firm.

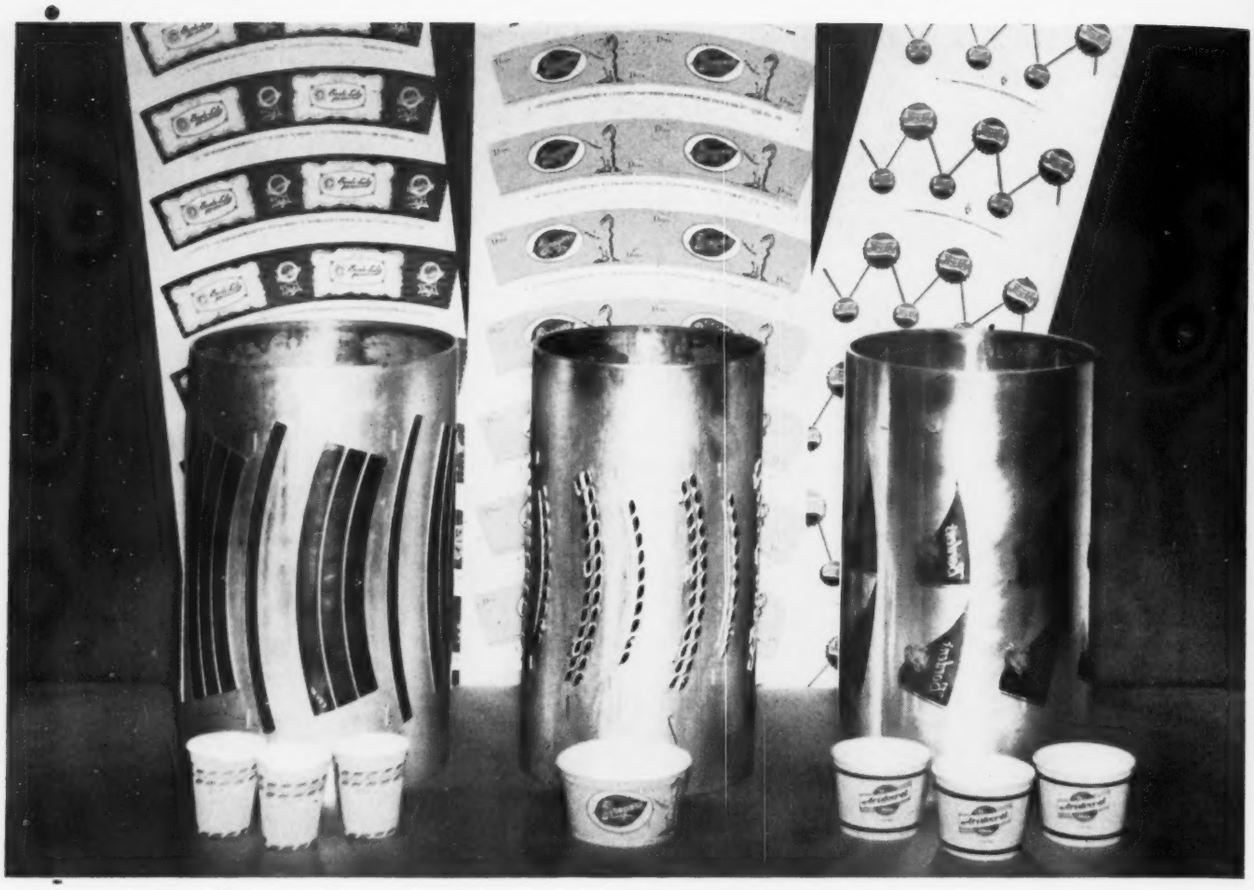


Fig. 1.—Cylinders, Printed Strips and Cups—The three magnesium cylinders shown above, made by Industrial Engraving Co., Easton, Pa. bear three of the many designs that are printed on Dixie cups by the Dixie Cup Co. On the center one is the pattern that appears on the drinking cups shown in the left-foreground. In the rear are sections of long strips of paper, printed and ready for feeding to cup-forming machines. It will be noticed that the designs run across the strips and are curved. The containers in the center and on the right are for packing ice cream. The Breyer design on the center one is also on the paper strip behind it.

Printing Cups from Magnesium Cylinders

By C. H. VIVIAN*

**Abstract of article in* Compressed Air Magazine, *of which Mr. Vivian is Editor.*

FOR ten years or more, Floyd Lear, sr., Head of Industrial Engraving Co., Easton, Pa., toyed with the idea of curving magnesium plates and through his continued efforts the Magnasleeve has been developed. His interest originated in a desire to help one of his customers, Dixie Cup Co., solve problems encountered in printing stock for paper cups.

The first Dixie drinking cups were produced without decoration, but the management soon realized that attractive printed designs would help sell them. Then the concern began to make cups for merchandisers of ice cream, cottage cheese and other food products, and each firm wanted its name, trademark, etc., to appear on the containers. Today, virtually every Dixie cup produced in Easton and four other cities bears a printed insignia of some kind. When it is considered that cups are used once and discarded and that they sell for a small fraction of a cent each, on an average, it is obvious that inexpensive printing is a necessity.

Actually, Dixie has several kinds of presses, including gravure units that cost approx. $50 thousand each. However, other presses equipped for cylindrical plates are used for a considerable amount of its work, especially where runs of intermediate amounts are concerned. It experienced the common troubles with electrotypes, however, and as the supplier of the original plates Mr. Lear naturally learned about them.

In an effort to do something about it, Lear first tried etching a brass cylinder, and discovered it was not practical, mainly because the preparation time was too great. He also attempted to etch a thin sheet of copper and stretch it around a cylinder. That, too, proved feasible but not economical. His experiments convinced him, however, that the idea was sound and would probably work commercially if a metal could be obtained that would machine and etch easily. This metal he eventually found in magnesium.

Magnesium Metal

Magnesium is, of course, a lightweight metal that has won attention fairly recently. It was virtually unknown in commerce until 1922, and for a good many years thereafter the Germans were the only ones to do much with it. They were, in fact, the first to use it for photoengravings, but it is not of record that they made cylindrical plates.

During World War II, Dow Chemical Co. built several American plants to turn out magnesium primarily for military purposes, and at the end of the conflict found itself with plenty of production facilities but few customers. To develop new outlets for the metal Dow investigated possible civilian applications which, in the light of the German experience, included printing plates. In the course of this work it produced an engravers' alloy that contains approximately 98 per cent magnesium and is now known as Zomag. It is reported to not only etch smoothly, but also faster than any other metal.

Having followed Dow research closely,

Fig. 2.—Etching—The man at the left is about to lower into the central cylindrical chamber of the etching machine a sleeve contained in a holder that seals its open ends. As it revolves in the machine, it will be showered with nitric acid entering through six equispaced vertical slots. This insures the acid striking the design head on and not from a side angle, which would cause undercutting and consequent weakening of the supporting metal. The acid is thrown from the six surrounding compartments by paddles, each of which is driven by a separate motor. The etcher was designed expressly for this service and is patented. The man at the right is examining an etched sleeve to determine whether it needs further etching.

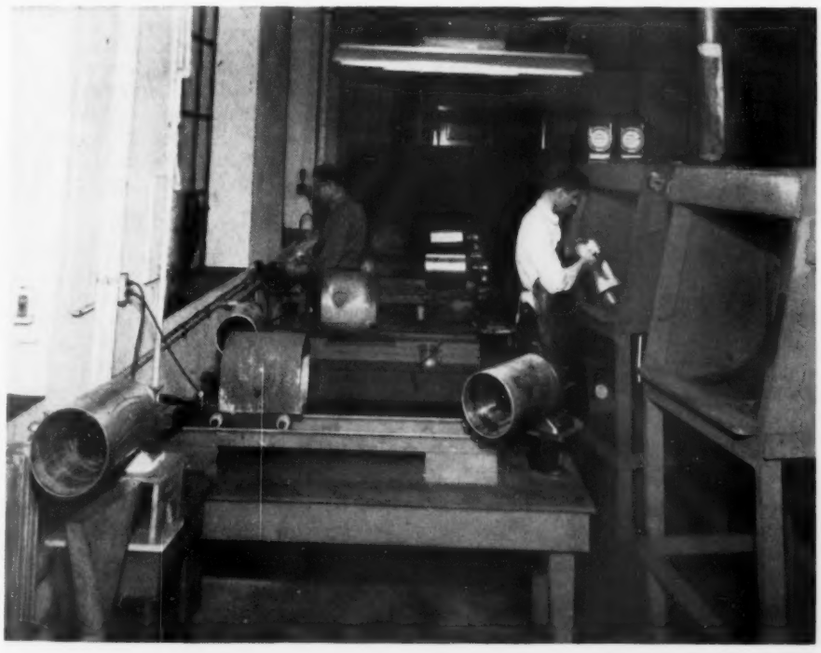


Fig. 3.—Powdering—Five or six exposures to the acid bath are required to etch the magnesium to the specified depth of 0.040 in. Between bites the design is powdered with Dragon's Blood. It is brushed on (man at right), after which the cylinder is heated by gas in one of the short tunnel sections mounted on the tables. Heating melts the powder, giving the top and side edges of the etched portions a coating that cools into a protecting film. Cooling is expedited by revolving the sleeve and exposing it to a blast of air (close-up at the right).

Mr. Lear and his three sons, who are in the business with him, arranged to get a cylinder for trial etching and subsequent test run in Dixie's Easton printing plant. As no facilities were then available for extruding magnesium, Dow machined a cylinder out of a solid block. Industrial engraved it more or less by makeshift means because equipment for doing that had not yet been devised, and turned it over to Dixie. Before being put on the press it was chromium-plated, as is customary with electrotypes, in order to increase its wear resistance.

The results of the trial were so successful that Dixie asked for additional cylinders, and six more were made. By that time, the Lears were satisfied that they could produce them in quantity at a reasonable cost and had begun to make rough designs of machinery to expedite the various operations involved. On the strength of what had been discovered, Dixie ordered $30 thousand worth of electroplating equipment so as to be prepared to chromium-plate the forthcoming cylinders.

During the two years that have intervened since the work was started, a floor in Industrial's building has been given over to the new product; much special equipment has been developed, built and placed in service; and the operations have been well organized. Cylinders or sleeves now come out of the shop at the rate of 30 or more weekly.

Advantages of Magnesium Cylinders

Because the magnesium cylinders are precisely round, and all areas on the printing surface are of equal height, they print evenly and sharply without the application of abnormal pressure. "We print now whereas we used to emboss," comments Harry Steiner, in charge of the company's printing.

Another advantage is the important time-saving factor. To change a sleeve on a cylinder requires about 15 min. If a 3-color job is called for, three cylinders are needed, and the total time involved becomes 45 min. To remove the snug fitting sleeve, four screws are removed from an end retaining plate and the cylinder-sleeve assembly is revolved slowly

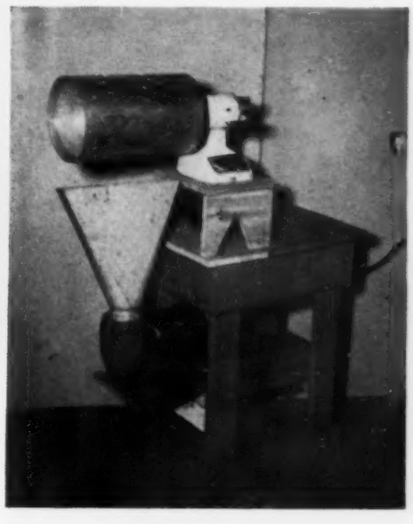


Fig. 4.—Finishing a Sleeve—As in the case of all types of photoengravings, the etched cylinder is scrutinized for defects by a skilled workman with the aid of a magnifying glass. Using hand tools (note those on the stand at the left), he removes surplus metal, sharpens lines and performs other finishing operations.

over a gas flame on a simple fixture. In a minute or less the magnesium expands so that the sleeve is loose enough to be pulled off by hand but still not too hot to cause discomfort to a man wearing thin cotton gloves. In similar fashion, the replacement sleeve is heated slightly, then slipped onto the steel cylinder, where it cools and contracts. The time saved is, of course, added to press running time, thus increasing production.

Because so many customers reorder periodically, Magnasleeves can be set aside until needed again and then slipped quickly onto a cylinder. Magnasleeves also have solved registration problems because each engraving is positioned with accuracy and can't move. It permits checking of position and register on the first impression.

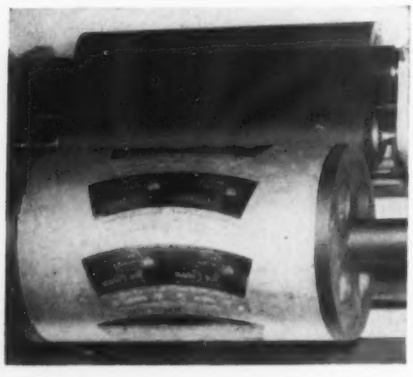


Fig. 5.—Setup for Printing—An engraved Magnasleeve in position on a press. To remove a cylinder, change the sleeve and remount it on a press ordinarily requires approx. 15 min. Printing from Magnasleeves is done at paper speeds of 200 to 300 f.p.m.

15 to 20 Million Impressions

Finally, there is the advantage of long service from magnesium cylinders. The accuracy of the Magnasleeve permits running with a light, even pressure, thereby reducing wear. Runs of 15 or 20 million are not uncommon, on a Magnasleeve, according to Mr. Lear.

Dixie has a few presses from which cylinders cannot be readily removed, and in the past electrotypes were put on and taken off with the cylinders in place. To service these units with Magnasleeve plates, a sleeve is produced in the ordinary way and then cut into individual-design sections. Being parts of a true cylinder, these plates print evenly. Industrial is now exploring the possibility of using such sectional plates in other fields.

Different Size Magnasleeves

Industrial now turns out Magnasleeves for printing cup (Fig. 1) designs from 3- to 12-up and in one, two and three colors. Finished cylinders are of nine different sizes, ranging from 22.5 to 26.25 in. in circumference and from 11 to 15⅞ in. in length. These are made from four sizes of stock, which Dow produces by the extrusion process. As received, the metal has a wall thickness of ½ to ¾ in.

The first operation is machining to size, and at that stage tolerances are held to 0.001 in. The desired surface smoothness is obtained by using a special tool for the final removal of material, and no polishing is required. The machined cylinders have a wall thickness of 0.187 in. identical with that of electrotypes, thus permitting them to be used on the press cylinders previously in service.

Engraving Procedure

The procedure followed in engraving Magnasleeves is essentially the same as that employed in making conventional flat plates. The design to be printed is first photographed according to the size of the reproduction wanted, with a permissible tolerance of not more than 1/64 in. After the negative is developed, it is placed on a template and indexed for subsequent positioning on the sleeve. It also receives marks to simplify registration and two lines about ¼ in. long that will appear in relief on the finished plate. At the time of printing, these lines make indentations near each edge of the paper strip and between designs. Later, when the strip is fed from a roll to the cup-forming machine, mechanical fingers come in contact with these grooves and insure that the cup will be produced with the design correctly positioned.

The negative is then placed on a magnesium sleeve that has been coated with a light-sensitive solution, and the image is transferred to the metal by exposing it to an arc light for about three minutes on a special rotary fixture. By rotating the sleeve in steps and repeating the process, the one negative suffices for transferring the motif as many times as the job may call for. Means are provided for turning the sleeve the same distance after each image transfer. Where 2- or 3-color designs are concerned, this permits the two or three negatives required to be positioned with precision and assures close registration in printing. (While cup designs are small enough to be duplicated several times on one sleeve, it is feasible, where the nature of the printing job calls for it, to use a design large enough to extend all the way around the cylinder).

Light passing through the negative strikes the sensitized material and renders it insoluble in water, while areas underlying opaque portions of the negative are protected from the light and remain water soluble. This makes it possible to wash away all but the design. After this has been done and the sleeve dried, the latter is dusted with an acid-resisting powder that adheres to the lines or dots of the image that remains.

Requires 4 or 5 Bites

Then comes etching (Fig. 2) which is done with nitric acid in a special machine. After a short or shallow bite, the sleeve is removed, washed with water and dried and then brushed in all four directions (Fig. 3) with Dragon's Blood.

It is next heated to fuse the powder, and the resulting liquid, which forms a solid film after cooling (Fig. 3) covers the sides of the lines or dots that have already been exposed by etching, thus preventing undercutting and consequent weakening on the next bite. In all, four or five exposures to the acid are required, with a treatment of Dragon's Blood after each one. The final depth of the etch is 0.040 in.

During the final process of hand finishing (Fig. 4), a skilled workman, viewing the etched surface under a magnifying glass, removes surplus metal, trues up lines, etc. As presently set up, Industrial can perform all the operations from negative to finished sleeve in less than an 8 hr. shift.

Regensteiner Passes

Theodore Regensteiner, founder of the company and chairman of the board, Regensteiner Corporation, Chicago, passed away in the pre-daylight hours on Tuesday, July 15. He was 84 years of age. One week before his passing he was at his desk. He had been taken to Grant Hospital the day before his passing. He was born in Munich, Germany. At the age of 15 he emigrated alone to this country and came directly to Chicago. His first job paid $3 per week. His inventive ingenuity led him into a number of ventures including collar buttons and mailboxes. In 1892 he married Anna Decker. The marriage was blessed with a daughter, Florence. The daughter became the wife of Regensteiner Corporation's President, Irving Winter. His interest in mechanical drawing, architecture and art drew him into the photoengraving business. After participating in the organization of the

Theodore Regensteiner, Chairman of the Board, Regensteiner Corporation, Chicago, passes on. He was a seven-time President of what is now the Graphic Arts Association of Illinois.

American 3 Color Co. and the American Colortype Co., he organized The Regensteiner Colortype Co. Two years after its founding, the company outgrew original quarters. His firm is noted for its specialty color printing. He is survived by his daughter, Florence Winter.

The ABC of OFFSET

For Letterpress Printers

Series Two

By George Jos. Lenzer

VIII—LAYOUT AND STRIPPING DEPARTMENTS

OFFSET-LITHOGRAPHERS and letterpress printers alike generally are alert for better, newer and simpler ways of doing things to increase production. Few, however, are willing to accept improvements in methods and procedures when they are available, even though no expense results.

Frederick G. Bonfils says "There is no hope for the satisfied man."

Whenever a state of satisfaction is reached by an individual or plant management; when a workman or plant owner feels that there is nothing more to add to an existing knowledge of an industry, or to improve obsolete equipment or plant facilities, then such a workman or plant is on the way out. *Eternal change is progress.*

In Offset, like in all other processes of the Graphic Arts industry, all operative procedures are not automatic or mechanical. There are certain operations which as yet must still be performed by hand. Layout and Stripping are no exceptions. These are operations which cannot be entirely or partially performed by mechanical means.

Since most hand operations are slower and more detrimental to increased production than are mechanical or automatic operations, some means of speeding up the production must be attained through work simplification, modernization of obsolete equipment, installation of time-saving devices and equipment, and better departmental planning for greater efficiency.

Before we enter into the discussion of Layout and Stripping departments and operations, let's look into a few of the existing setups and equipment which, after all, are of prime importance.

This writer has been privileged to visit, work in and to observe Layout and Stripping departments of almost every conceivable kind and variety, not alone in the offset industry but in other branches of the Graphic Arts industry as well.

Perhaps you, the reader, have seen or possibly maintain one or another of the kinds of departments about to be discussed. So, come with me on a few mental plant visits and compare a few Layout and Stripping departments.

Let's Compare a Few

It is unfortunate that we cannot visit the best planned departments alone. To exclude the worst ones may imply that they are all good and well planned setups.

We will begin our tour by visiting the poorest planned departments first and terminate our visits in one of the better and most modern. The reason for this switch is based upon the fact that most of the equipment used is similar, but not identical.

Plant No. 1

Here we are at the A-1 Printing and Litho Co., Anywhere, U.S.A. It's a small shop, located in some obscure alley building or abandoned store room. It boasts nothing more modern, perhaps, than a small offset duplicator, a camera, whirler, a hand-powered paper cutter, and a kitchen sink.

In addition to the paper stock and other supplies there is little more room to move, let alone breathe. Where do we find the Layout department? Why, right here in the corner of the office by the only window in the place. This for convenience, because the Layout man must double in brass and serve as office man as well.

What equipment does he have to work with? A poorly designed and homemade flattop light table, illuminated by a few light bulbs of several different sizes and kinds. No two sides are accurately squared. How about the window? Oh! there is a nice big piece of cardboard to be used as a window shade if there is too much light coming in at the window.

We will not attempt to draw any conclusions about such a plant, but you, the reader, should be able to visualize the difficulties encountered in attempting to streamline such a setup and its production. Truly, here is one where work simplification is necessary and essential.

Plant No. 2

Around the corner, on Main Street is the B-2 Litho and Printing Co. Here is an imposing structure faced with white

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limestone and an office entrance of marble and onyx. The office appointments are the finest obtainable.

When we ask Mr. B for permission to visit the plant, he wags his head and says, "So sorry, we do not permit visitors to go through our plant, not even our customers."

Don't let this delay bother you. Mr. B has good reason for the refusal. He's ashamed of what lies behind the office doors. Come on, perhaps we can get in by the back door, I know some of the boys. Ah! here we are, let's go in.

You're so right. Mr. B should be ashamed of his plant.

Looks like a packrat's nest, doesn't it? Come on, let us wade through this pile of paper trimmings and confetti and mosey over to the Layout department adjoining the pressroom.

If you have never seen a rat's nest, this is one. There is no ventilation of any kind. Where cleanliness should be one of the first considerations, this place is one mass of dirt and accumulated dust from floor to ceiling. The floors are littered with paper clippings, waste film, bits of cotton and other refuse.

Six 50 w. light bulbs illuminate the flat topped light tables, creating a checkerboard effect of hotspots upon the ground glass working surface. There are a couple of drop cords with 25 w. light bulbs hanging from the ceiling for supplementary lighting and they are so encrusted with dust and dirt that the light given off is extremely deficient.

And the workmen, with their dust and dirt smeared hands, faces and soiled clothing resemble coal miners from the deepest pits and mines.

When these conditions are called to the attention of our Mr. B he replies "That place and equipment has served me and my employees for 40 years, and it will have to serve for 40 years more."

Now that we have seen a gloomy place, we'll scram out of here, go over on Steenth Avenue and take a gander at A. Schnook's plant.

Plant No. 3

Because we are not customers, Mr. Schnook turns us over to his superintendent, Joe Blow. This character, before promotion to his present job, had formerly been the shipping clerk of the plant. Because he was one of the company's oldest employees, Mr. Schnook placed him in charge of the plant even though he knew nothing about lithography, much less, printing operations.

Joe Blow shows us to what he prefers to call the finest Layout and Stripping department in the world. Suppose we let him describe the place for us.

"Gent'men, dis Offset layout is my baby. The boss had hired a litografter, (I allus calls 'em grafters), to get the place organized. I let him go because he couldn't tell me nuttin'. I got a book oncet on litografy. I'll have to read it sometime. Imagine, that jerk wanted to buy some of these new gadget Layout and Strippin' tables, an' he wanted 'em lit up with these here 'lectric tube lights yet".

"I saved the boss some dough. Any dope knows that glass top tables is nonsence, so, I bought three reglar drawin' tables from Army Surplus. All that the guys has to do is put their paper on these tables and draw in their layouts. Now here we got some nice big windows. The fellers stick the layouts on the window glass with some gooey tape, and then they stick on the films with the same kind of sticky stuff. When it's all stuck up together, they takes it off the glass, turns the whole thing around and sticks it back onto the window, and cut out some little pieces of paper so the thingamajig will print on the plate. There's nuttin' to it. I not only saved the boss some dough on the table deal, but I'm savin' him some more 'lectric light bills, too."

"Gent'men, if I do say it myself, dis is the best layout department in the world. When I gets the bugs knocked out of it, I'll learn how to increase our production".

Plant No. 4

While Joe Blow is knocking out some bugs, let's stroll over to Broad Street and visit the Lithocraft Platemakers, located in the Printer's Building.

Mr. Lithographer is a genial chap, who greets us warmly and insists upon showing us his entire plant. He is exuberant, full of pride and enthusiasm, pointing out to us the efficiency of his plant in each individual department.

The entire plant, its atmosphere and personnel reflect the friendliness and enthusiasm of the owner.

As we pass from one department to the next, we note the absence of dirt, filth and accumulated dust. We cannot help but see and feel the cleanliness of the place.

Here is the Layout and Stripping department. Like all other departments in the plant, this cheery and pleasant place is painted in a harmonious color combination best suited to the departmental location and to the nature of the work to be done. Selection of color was greatly influenced by its effect upon the personnel.

Hanging upon the walls are framed reproductions of the finest jobs produced by the company. These are under glass and are changed frequently to make way for the latest and most current reproductions produced.

The department is centrally located, away from windows and other sources of extraneous light such as arc lamps, etc. Enclosed by protective and partial partitions, an aura of subdued light envelopes the place. According to plan, the Layout and Stripping department is connected to the camera department, commercial art and platemaking departments by separate doorways with swinging doors.

For uniformity in all operations the entire plant is provided with the most efficient air conditioning system.

To simplify Layout operations, a precision layout table is provided. This table affords repetitive layouts to a dimensional accuracy of 0.0015 in., horizontally and vertically, assuring the closest register.

Since this Layout table is designed to serve a specific purpose, no other operations are permitted to be performed on it.

Each stripping table is adjustable in height, is of the cold top variety. Two sides are accurately squared to accommodate the use of rigidly constructed steel T-squares of suitable length. These tables are additionally equipped with universal drafting machines, used primarily for rapid alignment of photographic elements as well as the establishment of screen angles.

In this machine are combined the functions of T-squares, triangles, scales, rulers and protractors. It has been estimated that a saving of 35 to 50 per cent of stripping time is possible by its use.

Upon close inspection of the glass table top, we notice an absence of scratches and deep cuts in the glass surface. For the cutting of films and paper, an auxiliary cutting surface is provided by an extra piece of photographic glass or a

Harris-Seybold Co.'s July-to-June calendar has been distributed to Graphic Arts firms throughout the world. It is a reproduction of an original oil painting by T. M. Cleland. This year's subject, "Romance", is the fourth and final picture of a colorful series interpreting contemporary American life. The scene depicts young lovers returning from a swim. Other lovers of all ages and moods, may be seen in the immediate area.

The 1952-53 mid-year calendar was produced by the Brown and Bigelow Co., St. Paul, Minn., on a two-color Harris 42 in. by 58 in. offset press. Fifty percent rag-content ivory stock was used for the calendar, which measures approximately 27 in. by 31 in.

A limited number of the calendars is still available, as are lithographed prints of the Cleland painting.

sheet of acetate film about 0.010 in. or 0.015 in. thick.

Elimination of all cuts and scratches on the surface glass of all light tables affords easier cleaning and prevents confusion of contrary markings resulting from the dirt filled cuts and scratches in the surface glass wherever they may occur.

Since layout and stripping are precision operations, every time saving device is employed to facilitate the increase in production so desirable in the plant.

Each work station is supplemented by a combination cabinet for the storage of tools, supplies and a supply of the most generally used sheets of masking papers.

A centrally located storage space is provided for departmental benefit. Here are stocked full size sheets of masking papers, departmental supplies, mechanical screen tint films, clear acetates and other vital material. A cabinet of drawers, large enough to accommodate film flats of the largest jobs produced, is provided. All jobs in production are assigned a separate drawer in which is stored the art work, positive or negative films and other pertinent material.

Here also is located a filing rack of dated compartments which serves as a production scheduling board and repository for job tickets or envelopes. The job ticket moves with the job, unless for efficiency the job is split, then supplementary tickets are issued which moves with each part of the divided job.

Departmental Lighting

In this shop, we see above each light table a fixture fitted with two 40 in. fluorescent tube lights. These lights illuminate a greater area of work surface which is a contributing factor to increase production and efficiency.

It is one thing to check the overall lighting with a light meter, but something entirely different to bombard the human eye with myriad beams of light and shadows projected through a halftone negative or positive.

(To Be Continued)

75th Anniversary Edition

On Tuesday, June 10, the New Orleans (La.) *Item* issued its 190 page Diamond Anniversary Edition. The paper consisted of 14 sections. It appears that Mechanical Supt. Luther Wright and his executive assistants (speaking of the mechanical departments only) had their hands full in exercising quality control. The paper is excellently printed and a liberal use of halftones makes the pages interesting and attractive. Sprinkled through the pages are articles with illustrations about *Item* editorial and business activities, including the various mechanical departments. Page 1 of the Newspaper section carries a four-column full length halftone of a vertical section of one of the Cutler-Hammer conveyors. It is an interesting study. Considerable information is included of a historical nature regarding the *Item*'s career in the Louisiana field.

Additional Transparent Proof Information

IN THE January 1952 issue, *Printing Equipment Engineer* printed pertinent excerpts from Research Bulletin No. 10, originally prepared by the Intl. Typographic Composition Assoc. for the benefit of its members. This material was published through the courtesy of Executive Secretary Frank M. Sherman. Since then, Mr. Sherman has sent to ITCA members information supplementary to the original Research Bulletin No. 10.

The observation is made that the ink preferred for white "backing" on transparent proofs is called Cello White No. C-2824 and is made by Kohl and Madden Printing Ink Co. The company's principal sales office is at 636 11th Ave., New York 19, N. Y. A branch office is located at 1132 So. Jefferson St., Chicago 5.

Mr. Sherman also reports: "It has been clearly demonstrated that the best transparent proofs are secured when the type form or plate is cleaned just before proofing with a type wash made up of equal parts by volume of Trichlor-Ethylene and Ethyl-Acetate. . . ."

"For use in slip sheeting of waxed transparent sheets," it is suggested, "Miradore Transparent Manifold Paper has been found to be entirely satisfactory."

An amended suggestion has been made that for cleaning the offset blanket on a Vandercook 4-T proof press, Varsol has been found to be entirely satisfactory. It not only cleans the blanket but also seems to have a reconditioning effect. When applying Varsol do not rub it in too much.

Other advice is as follows: "The Rapid-Mercury Blanket (red) which is supplied by Vandercook & Sons, Inc., with the 4-T press seems to be the most satisfactory for transparent proofing. Likewise, All-Purpose Rollers, supplied by Vandercook, give satisfactory results. If you are having trouble with ink building up or drying too quickly on your 4-T press, try stopping the large idler roller from rotating when not engaged in actual proofing. The continued agitation of the ink while the idler is in operation tends to dry it out and thicken it."

Members are advised that headquarters is able to provide its "CA" ink in any color to match a sample which may be desired. Mr. Sherman states: "We have standard red, blue, green, and yellow inks which are kept in stock for shipment on receipt of orders—but inks to match special colors will be subject to a delay of four or five days in shipment while the ink is being made.

"All inks sold by ITCA to members are billed at approximately the purchase price from the ink manufacturer, plus postage and insurance. We carry in stock standard "CA" black ink, halftone black ink, "CA" white ink, the standard colors listed above, and a maroon ink which is used for proofing heavy solids to give maximum opacity."

Offset Web Press Training

Training in offset web press operation will be offered for the first time by the Rochester Institute of Technology beginning in September, 1952. The program, consisting of one semester, 30 hours per week, covers the mechanics and operation of the four-color web offset press. Students may also register for one or more additional semesters according to their individual needs.

Carried on by means of technical discussions and supervised laboratory sessions, the program will provide instruction in performing duties in each operating station on the press—roll stands, printing units, folder and sheeter, and control panel.

Press equipment consists of a Webendorfer double-deck, four-unit, web offset periodical press capable of printing a wide variety of work, including four-color posters and broadsides, catalogs, eight-page tabloids with full color on each page, and sixteen-page black-and-white newspapers.

Supplementary instruction will also be available in related areas of plate graining, camerawork, layout and stripping, and platemaking.

Applicants should have general mechanical ability, knowledge of lithographic principles, and of sheet-fed lithographic presswork. Graduates in an offset major of the Department of Publishing and Printing at RIT are considered to satisfy these requirements.

Persons desiring to make application should write directly to Byron G. Culver, Department of Publishing and Printing, Rochester Institute of Technology, 65 Plymouth Ave. S., Rochester 8, N. Y.

New Non-corrosive Soldering Flux

A soldering flux which is non corrosive and can be used to solder metals that could not be soldered before is one of the new technical developments described in the June issue of the *Bibliography of Technical Reports*, now available.

This issue of the *Bibliography* lists over 200 Government research and development reports made available to the public in June. Reports describing technical developments in the chemical, mineral, metalworking, food, textile, and electronic industries are included.

The June, 1952 issue of the *Bibliography of Technical Reports* sells for 50c a copy, and may be purchased from the Office of Technical Service of the U. S. Dept. of Commerce, Washington 25, D. C., or through the U. S. Dept. of Commerce Field Offices. Orders should be accompanied by check or money order payable to the Treasury of the United States.

Canadian Distributor

Harris-Seybold Co. has been named Canadian distributor for Ideal rollers and Gelb photo equipment, according to Hedley Prout, Vice Pres. of Harris-Seybold (Canada) Ltd. Both products will be available through Harris-Seybold's offices in Toronto, Montreal and Vancouver, Prout stated.

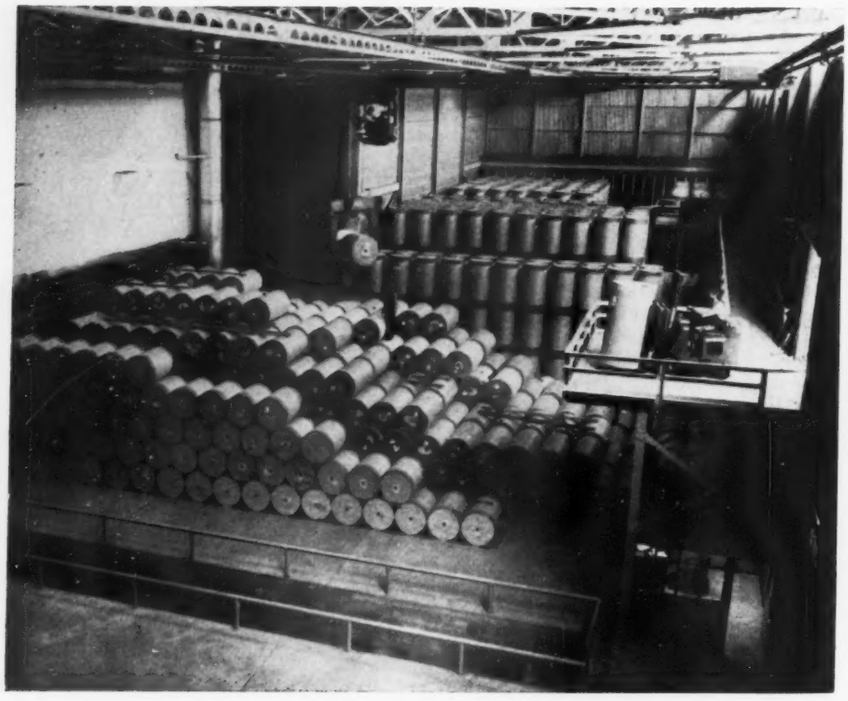


Fig. 1—Interior view of Oklahoma Publishing Co.'s newsprint warehouse shows both old and new methods of stacking 1500 lb. rolls of paper. The outmoded method of pyramiding rolls horizontally is viewed in the foreground which consumed more space and often buried rolls for months. The new method, vertical storage, can be seen in the background. This enables paper stocks to be dated upon arrival at the warehouse and later used in the order they were received. The projecting platform where the rolls are brought into the warehouse from railroad freight cars is at the right and the inclined ramp which leads to the reel room is in the immediate foreground.

Paper Roll Handling

Completely Mechanized

MECHANIZED equipment is one newspaper's answer to the problem of handling and storing rolls of newsprint. In the plant of the Oklahoma Publishing Co. (Opubco for short) in Oklahoma City, Okla., 1500 lb. rolls of paper are transported from box car, to paper warehouse, to reel room, by machinery.

Source of newsprint supply for the Oklahoma City *Oklahoman* and *Times* presses is a recently remodeled warehouse which has a storage capacity of 3000 T. of paper, or a 50 day supply. Foreman of this mammoth structure is O. F. Riggan. Opubco has scrapped outmoded methods and eliminated backbreaking labor by installing an overhead tram and power hoist to lift and stack rolls of newsprint. To conserve space and provide easy handling, heavy paper rolls are stacked on end, instead of on their sides in a pyramid.

But how this was all brought about goes back to January of 1949, when a large annex to the old paper warehouse was completed and filled with paper. This eased the storage problem somewhat, but added to the already difficult job of moving the rolls from the warehouse to the reel room under the presses.

As newsprint consumption for the *Oklahoman* and *Times* presses increased, a new solution had to be found to cope with this storage and handling problem. It was decided to remodel and enlarge the original warehouse to 15,635 sq. ft. of floor space with a 40 ft. high ceiling. Since it was impossible to raze the original warehouse until protection could be afforded more than 1000 T. of newsprint stored in the structure, the roof had to be constructed first. Forty-foot steel girders first were "planted" around the old building, then 8 T. prefabricated steel ceiling trusses were swung into place.

When the roof was finished, the old building was torn down and the new stone and brick walls were built. During this period, the normal flow of newsprint to the presses never stopped.

With the opening of its new warehouse, the company transformed its paper handling and storage in two years from an almost completely manual operation to an almost completely mechanized one. Last year, 22,000 T. of newsprint rolled through Opubco's presses. That's enough paper to fill 735 railroad freight cars—or a single freight train 10 mi. long. The volume has gone up until now the *Oklahoman* and *Times* use 2000 T. of paper a month.

The method of handling these paper rolls is carried out in a manner which is

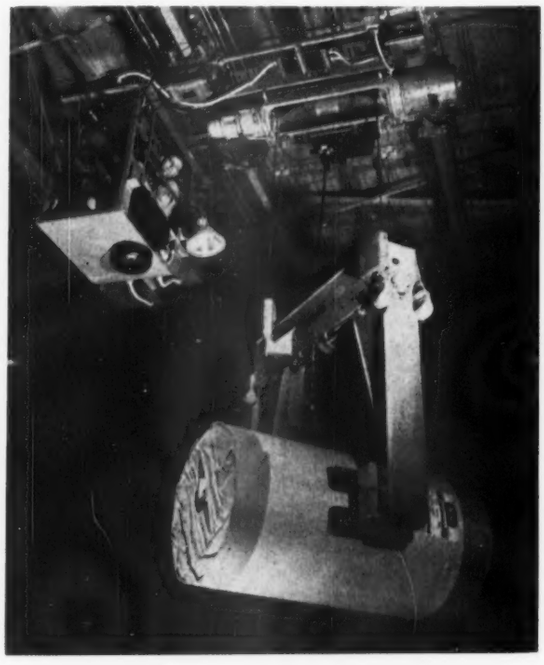
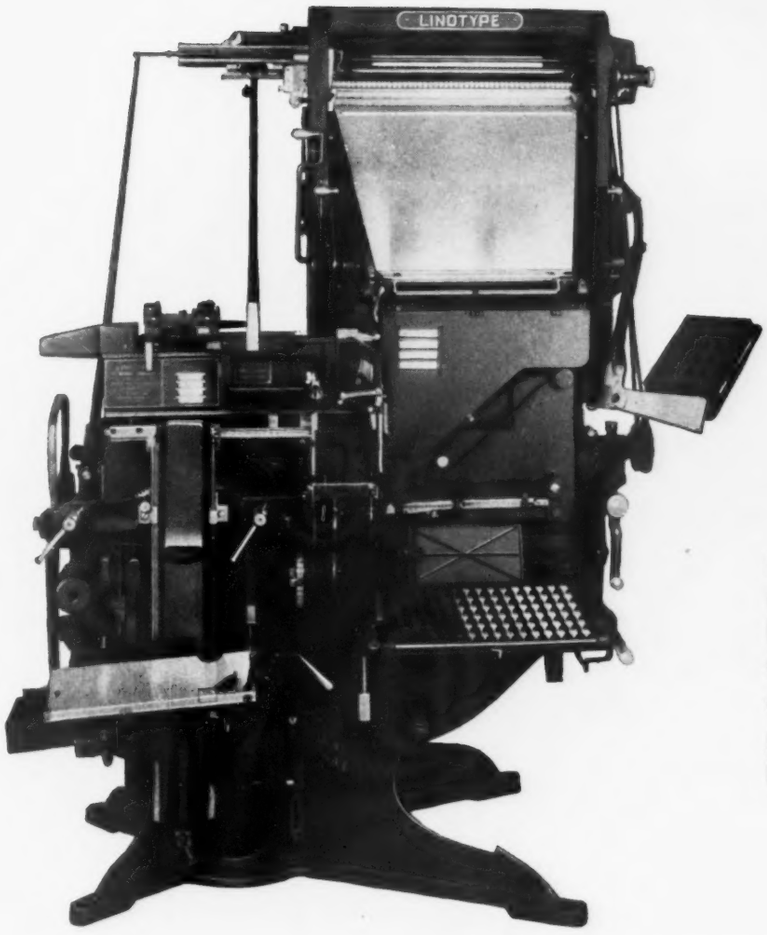


Fig. 2—A close-up of the overhead tram hoist maneuvering a roll of newsprint into storage position. The electrically-powered tram hoist is equipped with a pair of pneumatic fingers which grip the rolls on their journey through space. Kenneth R. Harris is at the controls.

Printers and Publishers call it the

WORKHOUSE

Of the Composing Room



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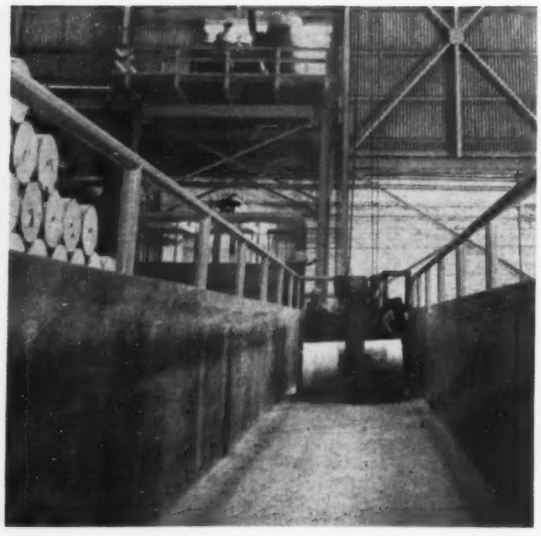

Fig. 3—This ramp is constructed on an incline for moving the paper rolls from the warehouse to the reel room without physical exertion. The overhead hoist deposits the roll on the ramp and it is rolled by gravity down into the reel room. A battery-powered lift truck can be seen at the top bringing a roll of paper onto a projected platform from the railroad siding.

characteristic of the planning behind the solution to the problem at hand. To begin with, the warehouse adjoins a railroad siding. This permits transfer of newsprint directly from box cars to the warehouse. Once moved by muscle-power alone, the rolls are now unloaded from box cars by means of a battery-powered, paper roll handling truck.

Operated by one man, the truck performs various services in handling, transporting and tiering rolls of newsprint. The equipment is capable of lifting the $\frac{3}{4}$ T. rolls from a horizontal to a vertical position and stacking them in tiers up to four high. The truck transports the rolls from the freight car to one of two projecting platforms inside the warehouse where the overhead tram hoist takes over.

The electrically-powered tram hoist is equipped with a pair of pneumatic fingers which grip the rolls of paper on their trip through space. The warehouse has two of these traversing hoists which allows immediate access to any corner.

This equipment also permits rolls to be stored vertically which utilizes space lost by the outmoded method of pyramiding rolls horizontally. Vertical storage also means that paper stocks can be dated upon arrival at the warehouse and later used in the order they were received. Under the horizontal storage system, some rolls often were buried for months and as a result, the paper became brittle and subject to tearing.

As the newsprint is needed for the presses, the tram hoist is once again brought into use in lifting the rolls from their storage positions and depositing them on an inclined concrete ramp. The ramp acts as the connecting link for transporting the paper from the warehouse to the reel room beneath the presses. The ramp was constructed on an incline in order that the paper might roll down into the reel room without physical exertion on the part of the workers.

The completion of the warehouse and ramp, the installation of the overhead tram hoist and the use of the battery-powered lift truck, has been Opubco's solution to newsprint storage and handling. It is a well defined example of equipment mechanization for speeding up materials handling.

Two New Letterpress Plates— Thermoplastic and Steel-Nickel

ACCORDING to *Patra News* (published by the Printing, Packaging and Allied Trades Research Assoc., Leatherhead, Surrey, Eng.) a conference was held in Fribourg, Switzerland, organized by the Lufaco Company to enable interested people to discuss the application of two kinds of letterpress printing plates—those made of various kinds of plastic material and a bi-metallic plate using nickel and steel.

Patra was represented by R. G. W. Croney, B.Sc., A.Inst.P., who is engaged on work of this nature at the Leatherhead laboratories. In an Interim Report* Mr. Croney describes two kinds of thermoplastic material developed for the manufacture of stereos, the first being a hard type of material intended for use on flatbed machines, the plate being mounted by lassoband to a resin-bonded chipboard. These stereos may be curved to fit rotary cylinders by warming. The second type of material is flexible and intended for use on rotary machines, although equally suitable for flatbed work, the mean value of the hardness being about 25-30 British Standard Hardness Number.

The resilience of the material is low and it is claimed the printing qualities are superior to rubber, which is verified by results obtained in the Patra laboratories. Lufaco claim that runs of 100 thousand or more can be obtained according to circumstances and the material is resistant to inks. In each case the thermoplastic material can be cleaned after use and used in the manufacture of further plates. Uses for the new material are suggested, such as molding plates from fabrics, wood, leaves, etc. The material can be used for "lino" cuts as it does not crack easily on flexing.

Bi-Metallic Letterpress Plate

This plate is stated to be unique in that it is the only bi-metallic letterpress plate using nickel on steel, although

*Interim Report No. 69. Report on a Demonstration of Lufaco Thermoplastic and Steel-Nickel Printing Plates held in Fribourg, Switzerland. By R. G. W. Croney.

Quick ANPA Action on Column Width Resolution

AS THE result of a motion passed unanimously at the recent ANPA Mechanical Conference in San Francisco in which the problem of column width reduction was referred to the ANPA Board of Directors, President Charles F. McCahill of the American Newspaper Publishers Assoc. has announced adoption by the ANPA Board of the following motion: Resolved, That the President is directed to appoint a committee to assemble the facts immediately as to the proposal of newspapers generally to reduce column width below 12 picas and report as promptly as possible.

In connection with the announcement, President McCahill said: "The Board feels that all angles of proposals for reduction in column width below 12 picas should be studied immediately and reported to the membership. The committee will gather information on the mechanical changes needed; the need for a change in width of mats and electrotypes from advertisers, and the effect on newsprint production."

At the ANPA Mechanical Conference in San Francisco on June 9, 10, and 11, there was considerable discussion about reducing the generally used column width of 12 picas to a narrower measurement with a consequent possibility of using either 8 col. or 9 col. pages with narrower or wider newsprint rolls than at present.

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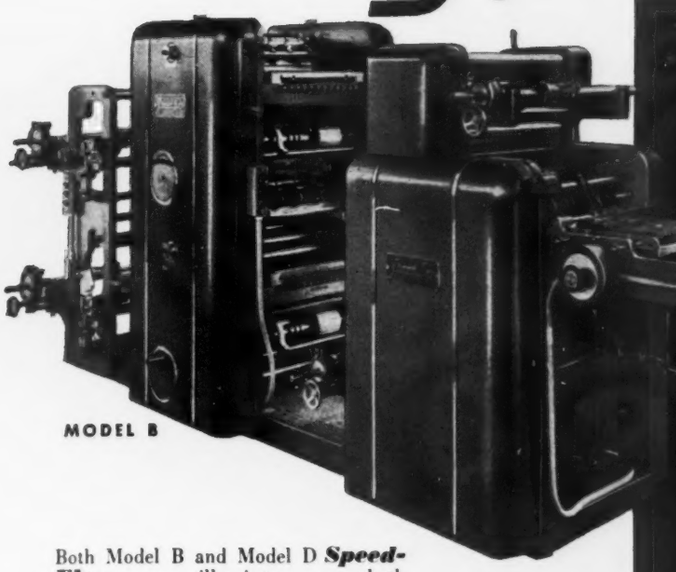

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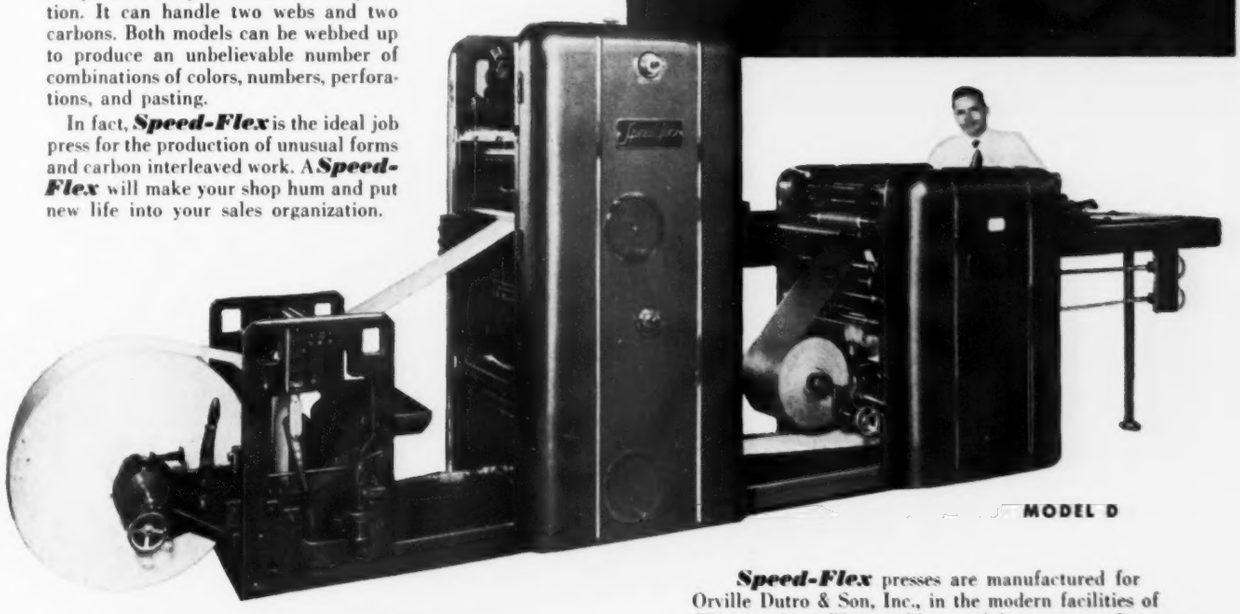

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plates using zinc on magnesium or copper on aluminum are being developed. The nickel on steel plate consists essentially of a steel plate on to which is rolled a sheet of nickel (about 0.002 to 0.004 in. thick), a method of production insuring a more uniform coating than can be obtained by electroplating. It is claimed that runs of up to 5 million can be made from these plates.

The usual photomechanical processes are used to produce an enamel resist on the nickel face, and it is stated that with certain kinds of plate the etching time might be as little as 10 sec. Etching stops when the nickel has been removed and the steel base plate is exposed. The plates are successfully made in all screens from 65 to 150 to the inch and large plates for printing the whole of a newspaper page can be made.

As an interesting possibility connected with this development Mr. Croney mentions the printing of 35 mm. sound film from a steel nickel tape on to paper. The print could then be projected from an epidiascope.

Column Widths Committee Named

CHARLES F. McCAHILL, President, American Newspaper Publishers Assoc., has announced membership of the Committee on Column Widths authorized by the ANPA Board of Directors. Members of the Committee follow:

W. L. Fanning, Westchester County Publishers, White Plains, N. Y., Chairman; Richard W. Slocum, Philadelphia (Pa.) *Bulletin*, Vice Chairman; Lynn N. Bitner, Gannett Newspapers, Rochester, N. Y.; W. G. Chandler, Scripps - Howard Newspapers, New York, N. Y.; William Dwight, Holyoke (Mass.) *Transcript-Telegram;* Charles J. Hentschell, St. Louis (Mo.) *Post-Dispatch;* Richard Lloyd Jones, Jr., Tulsa (Okla.) *Tribune* and *World;* Gene Robb, Hearst Newspapers, New York, N. Y.; Russ Stewart, Chicago (Ill.) *Sun-Times*.

This committee has been named following the request of the San Francisco ANPA Mechanical Conference that the problems associated with national effort to reduce newsprint roll widths be referred to the ANPA Board of Directors. The new committee is expected to make recommendations to member papers with respect to column width standardization, number of columns per page and other problems associated with rising newsprint prices, national advertising agency complaints and high shrinkage of stereotype mats.

Production in Advertising

by David G. Hymes

A Handy Reference Guide for the Experienced Craftsman, Beginner, and Layman

A 392 page illustrated text covering all phases of the Graphic Arts, written in an easy-to-understand style. Contents include recent information on new processes, new techniques and new materials; step-by-step diagrams of mechanical processes; detailed press-work operations; copyfitting tables; type face specimens and suggested combinations; discussion of kinds of paper used in printing.

$5.25 per copy
Cash with order

PRINTING EQUIPMENT Engineer
1276 W. Third St. Cleveland 13, O.

Martin Meixner, President of the Cleveland Printing Ink Co., recently was elected President of the Cleveland Association of Printing Manufacturers. The election took place during the association's annual meeting at Westwood Country Club.

G-E Press Drive

The Nashville (Tenn.) *Banner* and *Tennessean* have installed General Electric electronic press drive equipment. The two newspapers are printed on a Goss Headliner press by the Newspaper Printing Corp., Nashville. The press consists of 12 units and two folders and is capable of printing 120 thousand papers per hr. G-E equipment in the installation includes 14 50 h.p. motors individually supplied with power in a controlled flow by electronic controls. This avoids the unequal stresses which are a cause of breakage of the paper web as it travels through the presses, G-E engineers claim.

New York Firm Sold

The Thomas H. Crosley Co. has announced the purchase of the New York Electrotyping Co., Inc. The latter company, to be known as the New York Electrotype Corp., will maintain offices and its plant at 311 W. 43rd St., New York, N. Y., Phone: Circle 6-6295. A. Raisbeck Trown of the Crosley firm, and H. E. Dieckmann of New York Electrotype, have invited interested persons to visit the newly acquired plant.

Jones Comments European Trip

THOMAS Roy Jones, Board Chairman of American Type Founders, announced that his company will import some of its letterpress equipment which is made in England under license by Vickers-Armstrongs, Ltd., subsidiary of Vickers, Ltd. Reason for the importation, according to Mr. Jones, is ATF's inability to supply the demand of American printers and at the same time maintain the defense production schedules to which it is committed.

Recently returned from a European trip which included visits to Sweden and Germany as well as to England, Mr. Jones explained that, because of dollar shortages which limited U. S. exports to foreign countries, American Type Founders has been having some of its presses manufactured abroad for the past several years.

Press models which are currently scheduled for importation from England are the Kelly Three (25 in. by 37 in.), the Style C Kelly (17½ in. by 22½ in.) and the Model 6 Little Giant (12 in. by 18 in.). They are identical in specifications to the units which are manufactured in the United States.

For the past two years ATF has been selling and servicing English made Mann sheet-fed offset presses manufactured by another subsidiary of Vickers Limited.

Mr. Jones voiced the opinion, based upon his own observations in Europe and his company's world-wide operations, that there is a huge backlog of demand for better printing. It will not be filled, he thinks, until printers replace their old machinery with the new equipment which makes better printing possible.

Printing Week Committee

In order to coordinate and stimulate nation-wide interest and to explore avenues of effective participation in the observance of 1953 Printing Week, Ferd Voiland, jr., Printing Week Chairman, Intl. Assoc. of Printing House Craftsmen, has appointed the following Craftsmen to serve as members of the 1953 Committee: Rod Freeman, Los Angeles, Calif.; Clay Herrick, Cleveland, O.; Roy Kirby, Chicago, Ill.; Henri B. LeComte, Rochester, N. Y.; Henry W. Lightner, Grand Rapids, Mich.; Sol Malkoff, Atlanta, Ga.; Charles V. Morris, New York, N. Y.; Peter D. Nielsen, Emeryville, Calif.; Morris H. Reaves, Washington, D. C.; Reg. Rimmer, Winnipeg, Can.; Fred G. Snyder, Phoenix, Ariz.; Darrell Taylor, Seattle, Wash.; J. W. (Jack) Taylor, Tulsa, Okla.; Tom Tierney, Boston, Mass.; and T. H. (Bud) Turner, San Antonio, Tex. During the next eight months the Committee will be in communication with each Local Club Printing Week Chairman in an effort to energize the program ahead of the Club. The Public Relations Commission will provide during the same period of time the necessary news items pertaining to the observance for club and trade journal editors.

Top roller craftsmen build them

ALL-SYNTHETIC
RUBBER ROLLERS
COMPOSITION ROLLERS
LITHOGRAPH ROLLERS
MAKE READY PASTE
PADDING GLUE
LONG LYF ROLLER
DRESSING

Top printing craftsmen use them

AMERICAN ROLLER CO., 1342 N. Halsted, Chicago 22 • 225 N. New Jersey, Indianapolis 4

Kable Passes

The village of Mount Morris, Ill. and surrounding community was saddened on July 2 by the death of Harry G. Kable, 71, President of Kable Printing Co., and one of the pioneer printing executives of our day. Mr. Kable had apparently enjoyed good health until a week prior to his death, when he was stricken with a heart attack. He had been active in the company's affairs until his fatal illness.

Harry Kable, together with his twin brother, Harvey J., embarked in the printing business in 1898 at Mount Morris, when they began publishing a weekly newspaper, *the Mount Morris Index*. Theirs is an epic chapter in the history of printing enterprises in our nation. In 1904 they launched the firm known today as Kable Printing Co. when a contract was secured to print 40,000 copies of an 8 page monthly magazine for the Mystic Workers of the World, a fraternal organization with headquarters at Fulton, Ill. At this time, in need of adequate printing equipment, the Kable twins decided to incorporate their business. They enlisted the aid of several prominent citizens of this northern Illinois village, at that time boasting a population of 1000 inhabitants, and $15 thousand working capital was subscribed toward their project.

The Kable Printing Co. has grown to one of the largest and best known publication printing firms in the country. Occupying floor space equivalent to 6 A., it employs 1200 workers, manufactures nearly 170 different periodicals ranging in circulation up to 4 million copies monthly, and disburses well over $ 5 million annually in wages to its employees—this in a village which has now grown to some 3000 population.

The story of Kable Printing Co., together with the lives of its founders, one of whom was its recently deceased president, goes far beyond the usual saga of typical American business enterprises which have grown from a similarly humble beginning. Harry Kable had an intense and abiding interest in his community and its citizens, a deep sense of responsibility for the personal happiness and welfare of his company's employees. At his instigation, the company organized and financed housing projects which have resulted in the building and sale of scores of houses to employees on a time payment basis, without a dollar of profit to the company. Under his guidance and direction, a beautiful golf course adjoins the rear of the printing establishment, built partially on company property and partly on Mr. Kable's personal property for the pleasure of employees and townspeople.

His chief hobby had been music, and for 50 years he actively supported and played in the town band, known today as the Kable Concert Band. In this organization he played the baritone horn, and missed participating in only one Saturday evening concert this year—the Saturday preceding his death, when he was too ill to attend. A first-rate performer on his chosen instrument, Mr. Kable never missed a band rehearsal unless business prevented.

Since 1910, departments of the big printing firm have been manned by union craftsmen. In all these years there has never been a shutdown or work stoppage of any kind due to altercations or wage disputes between management and employees. Perhaps this exemplifies best the character of Harry G. Kable, and the esteem in which he was held by employees, who were his fellow citizens and friends.

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GRAPHIC ARTS PRODUCTS
540 W. CONGRESS ST. • DETROIT 26, MICHIGAN

Handbook for Pressmen
BY FRED W. HOCH

$4.25 per copy

Because of the small handling margin please enclose cash with order.

This is a practical technical discussion of all platen and cylinder press operations in the commercial pressroom. The language used by the author is *your* language—the text is written simply and pertains to the operations actually preformed in the pressroom.

To give an idea about the contents of the book we quote some of the chapter titles:

- Methods of Line-up
- Presswork
- Makeready, Platen Presses
- Makeready, Cylinder Presses
- Overlays and Makeready
- Close Register
- Setting the Rollers
- Overcoming Offset
- Workups—Cause and Remedy
- Slurs—Cause and Remedy
- Repairing Plate Batters
- Ink
- Color Mixing and Matching
- Metallic Inks

Some of the more unusual operations to many pressrooms are covered by the author in the following chapters:

- Printing Water Color Jobs
- Two Colors on One-Color Press
- Patent Base Speeds Imprint Jobs
- Printing on Cellophane
- Printing Facsimile Letters
- Details of Embossing
- Hot-Plate Embossing and Paneling
- Gum Label and Embossed Seal Printing
- Die-Cutting Methods
- The Stencil Screen Process

And much other valuable pressroom information. This book is bound in brown cloth, contains 236 pages, 6 in. by 9½ in., is well illustrated with line diagrams and a number of charts.

Printing Equipment *Engineer*
1276 West Third St.
Cleveland 13, Ohio

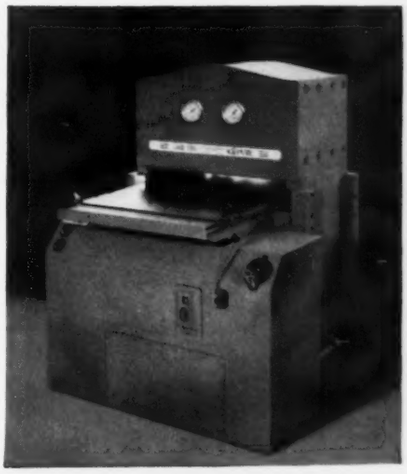
Look what the makers of LAKE ERIE ACRAPLATE can do for YOU!

How the Lake Erie Organization can help you

1. Provide a *departmental layout* that will give you the best possible arrangement of equipment and the most efficient use of your plant space.
2. Recommend *operation procedures* to give you maximum efficiency and minimum production costs.
3. Furnish a detailed *heating and cooling system* that will give precise, dependable results with a minimum of maintenance.
4. Give you *unbiased aid* in the *selection of materials* if you desire. (ACRAPLATE presses are designed to work with *all* recognized materials including promising new materials now under development.)
5. Help you *initiate production* in your new, expanded or modernized plant.

• • • a unique service of great value to rubber and plastic plate molders who are setting up, expanding or modernizing their plants.

Only Lake Erie has the organization and background to offer this invaluable service to rubber and plastic plate molders on a basis of *complete* experience while advising you impartially on selection of materials. Lake Erie has built and sold far more equipment (over 500 ACRAPLATES) than all other makes combined . . . has been working with the leaders in the graphic arts industries for over 15 years. The thorough knowledge gained through these years of close association with rubber and plastic plate molders and users is ready to serve you. Why not take advantage of it? Why not be sure of having the best and most efficient plant possible for your money? Write or call for our recommendations.



ACRAPLATE—The overwhelming favorite of rubber and plastic plate molders. Model 27 illustrated has a capacity of 270 tons and platens measuring 31″ x 25″. Other models have pressure capacities ranging from 115 to 550 tons and platen sizes from 17″ x 22″ to 36″ x 44″. There's an ACRAPLATE for every type and size of plant.

WRITE FOR BULLETIN No. 350 illustrating and describing the many models of ACRAPLATE.

LAKE ERIE ENGINEERING CORP.
BUFFALO, N.Y. U.S.A.

LAKE ERIE ENGINEERING CORP.

General Offices and Plant
568 Woodward Avenue, Buffalo 17, New York

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● Manufacturers of the most complete line of hydraulic presses — 3,500 designs from 5 to 22,000 tons — stereotype molding . . . plastics molding . . . rubber vulcanizing . . . laminating . . . metal forming . . . metal extrusion . . . die casting . . . briquetting . . . wallboard . . . plywood . . . special purpose.

LAKE ERIE ® ACRAPLATE ®

Test Shows Run-of-Paper Color Ads Are Feasible on a Local Basis

THE practicality of high-quality four-color newspaper advertising produced on a local basis at a cost within the reach of the majority of the nation's retailers is indicated in a recent cooperative test conducted in Buffalo, N. Y., it has been announced.

Kleinhans—one of Buffalo's leading retailers—sponsored a full color ad which appeared in the Thursday morning (May 22) edition of the Buffalo *Courier-Express*. The advertisement was produced run-of-paper.

Kleinhans reports that the promotion—based solely on the single four-color ad—was one of the most successful in the company's history. More than 1,000 pair of men's slacks were sold in the first two days, while traffic through the store was generally increased and led to substantially higher-than-average store sales.

The advertisement was prepared by Kleinhans with its own photographer and layout staff with the cooperation of the *Courier-Express* and the Eastman Kodak Co.

Participants agree that the venture may well point the way toward a new concept of retail advertising on both local and national levels. This is felt to be feasible since the advertisement has shown that four-color advertisements can be produced locally at a cost which will permit such ads to be placed by retailers on a contract basis.

This is expected to prove not only of inestimable value to retailers—for whom color advertising normally produces results far in excess of black-and-white—but also for the more than 400 newspapers who are now equipped to print one or more colors in addition to black. Of those newspapers, more than 150 are said to be capable of producing four colors run-of-paper.

The experiment stems from the belief at Eastman Kodak Co. that recent progress in the Graphic Arts and photography have been such that wider use of color in regular newspaper advertising and editorial pages is now possible at reasonable cost. To illustrate this, Kodak proposed that the *Courier-Express* and one of its advertisers conduct a practical demonstration.

Providing Definite Check

To provide a definite check on results, the company suggested to the *Courier-Express* that it choose an advertiser who might normally be expected to use four-color advertising if such were feasible. It also asked that for the purposes of the test, the store be willing to feature a specific item whose sales could be carefully checked to determine the pulling power of a full-color ad in contrast to the results the store would normally expect from a similar black-and-white push.

Kleinhans agreed to participate and prepare the ad. The store has participated in some national cooperative advertising in the past, but had never before had locally produced four-color ads.

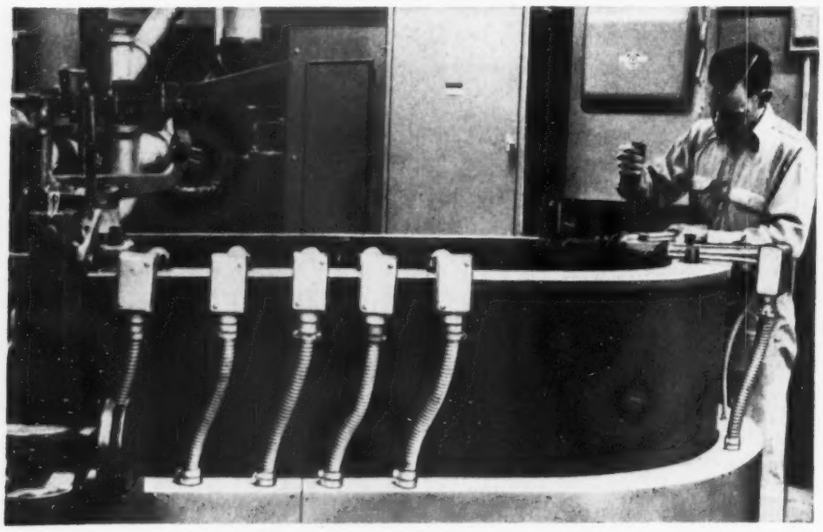
The demonstration revealed that a number of important factors must be borne in mind if newspaper color advertising on the retail level is to be made feasible.

Brightness Range of Color Copy

First, the brightness range of color copy selected for reproduction must always be remembered. The original Ektachrome transparency produced by the store for use in the ad had a brightness range—from the darkest to the lightest colors—in excess of 3.0 on a densitometer. Since the usual magazine reproduction range on good quality paper averages 1.25 and since for newspaper work about 0.95 must be considered optimum, it was immediately obvious that the transparency could not be successfully reproduced without the loss of considerable quality.

As a result, the photography was reshot to produce a transparency whose range was as close as possible to the optimum. The final picture, which contrasted the slacks with a dark colored car and surroundings had a range of about 2.0 which permitted the engravers to produce plates which would quite faith-

New Printing Plant Chooses G-E Heaters For Efficient Stereotype Metal Melting



The Lancaster, Pennsylvania, INTELLIGENCER-JOURNAL, NEW ERA, and SUNDAY NEWS have chosen G-E Calrod* heaters for stereotype metal melting in their new printing plant. This modern plant prints six editions daily with a total circulation of 73,000, and they must use the most reliable melting methods.

Nine 10-kw Calrod immersion heaters heat 7 tons of type metal to exacting temperatures, and then keep the metal molten.

Insist on G-E Calrod immersion heaters because:

- **Accurate control of temperatures** provides sharp type faces at low operating costs.
- **Dependable heat** meets exacting time schedules and reduces shutdowns.
- **Electric heat melts metals fast** so there is always plenty of hot metal.
- **Automatic operation** gives uniform results and working conditions are improved because no waste gases contaminate the atmosphere.

CALL, WRITE OR SEE your nearest G-E Sales Office for suggestions and recommendations on *your* metal melting job. Or send for Bulletin GEA-5453 to *Section* 720-79, *General Electric Company, Schenectady, N. Y.*

*Reg. Trademark of General Electric Co.

GENERAL ELECTRIC

Composition Bulletins . . .

For Graphic Arts Industry

COMPOSITION GROUP

- **Type Metals, No. C-1.** Contains information as to the chemical and physical properties of type and plate metal and metal alloys, and the specific printing used for each kind of type metal. Also includes specification tables for various type metals.

- **Reproduction Proofs, No. C-2.** Explanation of methods, materials and equipment necessary for producing black-on-white reproduction proofs from printing forms.

- **Transparent Proofs, No. C-3.** Explanation of the technique for producing transparent proofs from type forms.

Price for set . . . $2.50

RESEARCH AND ENGINEERING COUNCIL
of the GRAPHIC ARTS INDUSTRY
719 Fifteenth St., N. W. Washington 5, D. C.

General Bulletins . . . . . .

For Graphic Arts Industry

GENERAL GROUP

- **Detergents for the Printer, No. M-1.** Information regarding detergents used in the Graphic Arts industry.

- **A Listing of Research Developments & Engineering Programs Pertaining to the Graphic Arts, No. RS-2.** Description of research projects currently going on in printing industry.

- **Preventive Maintenance, No. EQ-2.** Includes points of a planned preventive maintenance program and the essentials for planning and installing such a program.

- **General Specifications For Operating Instruction Manuals, No. EQ-1.** Specifications for the proper preparation of instruction manuals by equipment manufacturers.

- **Static Electricity, No. PA-1.** Recent theories and experience of the Graphic Arts industry in the control of static electricity. All known techniques are discussed.

Price for set . . . $6.00

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Platemaking Bulletins . . .

For Graphic Arts Industry

PLATEMAKING GROUP

- **Electrotyping in the Government Printing Office, No. PL-2.** Includes specifications, procedures, techniques and formulae used by the GPO in preparing all kinds of electrotypes.

- **Basic Requirements for Electrotypes.** Information for the customer, photoengraver, compositor and electrotyper in producing a good plate.

- **Magnesium Plates, No. PL-1.** Contains data and experience on the use of magnesium plates in the letterpress field.

- **Plates, No. CONF-1.** A report containing the proceedings of the conference on printing plates held at Battelle Institute, Columbus, O., February 1950.

- **Photoengraving Specifications Manual.** Specifications for the production of photoengravings to aid in improving quality and cutting costs and waste.

Price for set . . . $4.00

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Bookbinding Bulletins . . .

For Graphic Arts Industry

BOOKBINDING GROUP

- **The Process of Marbling Paper, No. B-1**
- **Bookbinding Pastes, No. B-2**
- **Bindery Glues, No. B-3**
- **Miscellaneous Bookbinding Adhesives, No. B-4**
- **Ruling Inks and Dyes, No. I-1**
- **Bookbinding Leather, No. B-5**
- **Bronze Stamping Leaf, No. B-6**
- **Pyroxylin-Treated Book Cloths, No. B-7**
- **Control of Warp in Book Covers, No. B-8**
- **Paper Boards for Bookbinding, No. B-9**

Price for set . . . $2.00

RESEARCH AND ENGINEERING COUNCIL
of the GRAPHIC ARTS INDUSTRY
719 Fifteenth St., N. W. Washington 5, D. C.

fully reproduce the majority of tones. This resulted in great retention of detail and a much more pleasing picture of high quality.

Simple Layout—Careful Planning

Next, it was learned that a simple layout and careful planning would enable them to cut costs substantially. The original layout proposed by the store called for a central picture surrounded by many small swatches of material to show the different fabrics in which the slacks were available. Each of these swatches was to be routed, a procedure which, if carried out, would have added several hours work to the production of the plates and substantially increased costs.

The store solved this problem by arranging the swatches in the position that would appear in the final ad, and by photographing them against a tinted background which gave good color contrast and eliminated the necessity for routing. The ad, as a result, is made of just two plates—one for the main illustration, and one for a border of swatches.

Deference to Stock

In the final work on the plates, consideration was given to the color of the newspaper stock—which is an off-white, and the properties of the inks used in newspaper letterpress printing.

Separation Negatives

Separation negatives for the job were produced on the Time-Life Scanner by Printing Developments, Inc., a Time-Life subsidiary, of New York City. These negatives saved a tremendous amount of time and effort—and considerable expense—in the production of the plates. They are said to be an important part of the process since they permitted the retention of a large amount of detail that have been difficult to obtain by other separation negative making techniques.

The separations were delivered to the Niagara Engraving Co., a subsidiary of the *Courier-Express*, who stripped them together in the screen negative stage and made the copper plates.

Retention of Detail in Etching

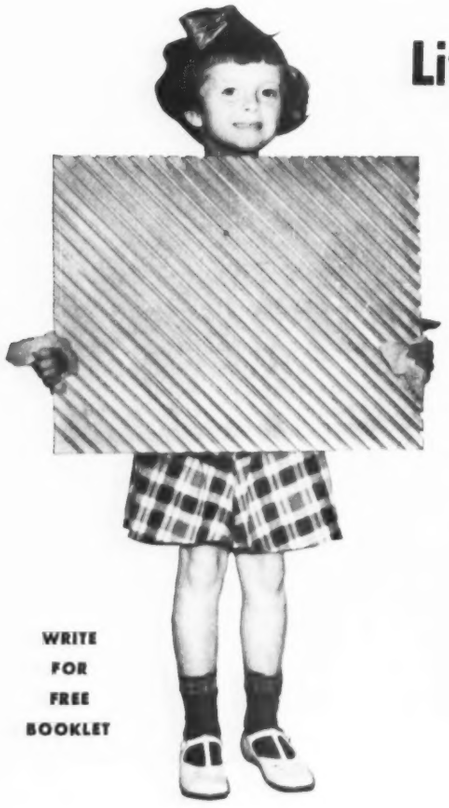
A variation of conventional plate making procedures was also used in the test to assure the retention of the greatest possible detail. In this case, instead of etching the plates for 30 to 40 min. the plates were still-etched for 100 min.—almost two and a half times normal. This procedure let chemistry and photography do the work of preserving maximum detail.

As a further example of the results obtained Kodak has engaged the *Courier-Express* to print a large over-run of the page involved. This page will carry on the back a number of photographs and explanatory copy showing the procedure and will be bound into printing and publishing magazines as a Kodak advertisement to show members of the publishing industry the results which can be obtained from run-of-paper four-color reproduction produced economically by present day techniques.

•*Time-Saving Tip*

Pica-Inch Confusion

A GREAT deal of confusion frequently occurs in converting inches to picas which is time consuming for the worker to stop and figure out mathematically. To overcome this, use a combined pica-inch gauge which contains matched pica and inch scales. These scales are numbered and calibrated on the edges and again at the center where one scale can be read against the other. These gauges are of special value to printers, engravers, layout, production and makeup men, editors and commercial artists. Several are available on the market.—Reported by Herbert Ahrendt, Vice President, Ahrendt, Inc., New York, N. Y., before Cleveland Craftsmen's club.



WRITE FOR FREE BOOKLET

Little Girls Don't Work In Pressrooms

But—If they did, they could easily lift WESEL magnesium final base . . . pressmen speed production with this lightweight base.

The Wesel Final Plate Mounting System using base made of magnesium alloy speeds production and increases profits. It gives positive lock-up and maintains permanent register on extra-long runs. For greater efficiency in your pressroom use Wesel Magnesium Final Base . . . the system that features the Bull Dog Hook that just won't let go!

Manufacturers of Quality Equipment for The Graphic Arts Industry

WESEL MANUFACTURING COMPANY

1141 N. Washington Ave., Scranton 9, Pa.

Conference Dates

(With Organization Names and Principal Officers)

American Photoengravers Association — 1952 Convention, Drake Hotel, Chicago, October 6, 7 and 8. W. K. James, President; Frank J. Schreiber, Executive Secretary, 166 W. Van Buren St., Chicago 4, Ill.

ANPA Mechanical Conference — 1953 Conference, Milwaukee, Wis., June 15, 16 and 17. Conference sessions and exhibits to be held in Civic Auditorium; Conference headquarters, Hotel Schroeder. Chairman of the Committee, L. J. Griner, Production Mgr. Detroit *Free Press;* Manager ANPA Mechanical Dept., Vernon R. Spitaleri, 370 Lexington Ave., New York 17, N. Y.

Fifth District Craftsmen's Conference—Secretary-Treasurer, Robert Wolf, Richardson-Taylor-Globe Co., 4501 Mitchell Ave., Cincinnati 32, O.

Graphic Arts Trade Association Executives—1952 Annual meeting, Plaza Hotel, St. Louis, Mo. October 10 and 11. President, Henry Henneberg, c/o Printing Industries Assoc., 2569 W. Olympic Blvd., Los Angeles 6, Calif.

Gravure Technical Association—Secretary-Treasurer, J. E. Hazel, Room 4800, 30 Rockefeller Plaza, New York 20, N. Y.

Great Lakes Newspaper Mechanical Conference—1953 Conference, Deshler-Wallick Hotel, Columbus, O., January 10-13. President, Harry A. Miller, Mechanical Supt., Dayton (O.) *Daily News;* Secretary-Treasurer, Don Clark, Stereotype Supt., Grand Rapids (Mich.) *Press.* Co-chairmen, Manufacturers' and Suppliers' Committee, Ray Burgoon, Sales Representative, Mergenthaler Linotype Co., 192 Haldy Ave., Columbus 4, O.; Clarence Seaman, Vice President, Imperial Type Metal Co., 1276 W. Third St., Cleveland 13, O.

Illinois Newspaper Mechanical Conference—1952 Conference, Hotel Kankakee, Kankakee, Ill., October 4 and 5. President, Verne Bradley, Kankakee, (Ill.) *Daily Journal;* Secretary-Treasurer, Wilbur L. Augspurger, Peoria (Ill.) Newspapers, Inc.

Intl. Assoc. Electrotypers & Stereotypers—1952 Convention, Cosmopolitan Hotel, Denver, Colo., October 13, 14, 15 and 16. President, C. C. Barnes, Ft. Wayne Engraving Co., 118-120 W. Superior St., Ft. Wayne 1, Ind.; A. P. Schloegel, Executive Secretary, 701 Leader Bldg., Cleveland 14, O.

International Association of Printing House Craftsmen—1952 Convention, Jefferson Hotel, St. Louis, August 10, 11, 12 and 13. President, J. Homer Winkler, Battelle Memorial Institute, 505 King Ave., Columbus 1, O.; Executive Secretary, Pearl E. Oldt, 18 E. Fourth St., Cincinnati 2, Ohio.

International Graphic Arts Education Association—1953 meeting to be held in New York, N. Y., in June. Dates and hotel to be announced later. President, Patrick F. Boughal, Principal, New York (N. Y.) School of Printing; Acting Educational Director, Fred J. Hartman, 719 Fifteenth St., N. W., Washington 5, D. C.

International Typographic Composition Association—1952 Convention, Hotel Statler, St. Louis, Mo., October 9, 10 and 11. 1953 Convention, Mayflower Hotel, Washington, D. C., September 24, 25 and 26. President, John R. Connell, Connell Typesetting Co., 302 E. Eighth St., Kansas City 6, Mo.; Frank M. Sherman, Executive Director, 1015 Chestnut St., Philadelphia 7, Pa.

Iowa Daily Newspaper Mechanical Conference — President, Glen Meloy, Des Moines (Ia.) *Register-Tribune;* Secretary-Treasurer, Paul F. Kamler, Mechanical Supt., Clinton (Ia.) *Herald.*

Kansas Newspaper Mechanical Conference — 1952 Conference, Broadview Hotel, Wichita, Kan., September 13 and 14. President, W. A. Blackburn, Herington (Kan.) *Advertiser-Times;* Secretary-Treasurer, Larry Miller, Kansas Press Assoc., 701 Jackson St., Topeka, Kan.

Lithographers National Association — 1953 Convention, Edgewater Beach Hotel, Chicago, June 17, 18 and 19. President, William H. Walters, United States Printing and Lithograph Co., Mineola, L. I., N. Y.; Executive Director, W. Floyd Maxwell, 420 Lexington Ave., New York 17, N. Y.

Mid-Atlantic Mechanical Conference — 1953 Conference, William Penn Hotel, Pittsburgh, Pa., March 12, 13 and 14. Jointly sponsored by the New Jersey Press Assoc. and the Pennsylvania Newspaper Publishers Assoc. Conference Director, Theodore A. Serrill, PNPA General Mgr., 209 Telegraph Bldg., Harrisburg, Pa.

Missouri Newspaper Mechanical Conference—1952 Conference, Hotel President, Kansas City, Mo., October 11 and 12. President, Mike Creasy, Composing Room Supt., Columbia (Mo.) *Tribune;* Secretary-Treasurer, O. K. Hammitt, Mechanical Supt., Moberly (Mo.) *Monitor-Index.*

National Safety Congress and Exposition—Fortieth meeting to be held October 20, 21, 22, 23, 24, 1952. Industrial safety sessions scheduled for Conrad Hilton, Congress, Morrison and Sheraton Hotels. R. L. Forney, General Secy., National Safety Council, 425 N. Michigan Ave., Chicago 11, Ill.

National Association of Litho Clubs — 1953 Convention to be held in Detroit during month of May, exact dates and hotel to be announced later. President, John F. Maquire, Offset Engravers, 42 E. 20th St., New York, N. Y.; Secretary, Angelo Pustorino, Daniel Murphy Co., 480 Canal St., New York, N. Y.

National Association of Photo-Lithographers—1952 Convention, Hotel New Yorker, New York, N. Y., November 5, 6, 7 and 8. Executive Vice President, Walter E. Soderstrom, 317 West 45th St., New York 36, N. Y.

National Printing Equipment Association, Inc.—1952 meeting, Chase Hotel, St. Louis, October 15. Directors meeting at 8 P.M., October 14, Chase Hotel. President, Fred S. Tipson, T. W. & C. B. Sheridan Co., 135 Lafayette St., New York 13, N. Y.; James E. Bennet, Secretary, 140 Nassau St., New York 38, N. Y.

New England Mechanical Conference — 1952 Conference, Hotel Statler, Boston, October 25 and 26. The 1953 Conference will be held at Hotel Statler on October 17 and 18, 1953. 1952 officers: President, Howard J. Mehigan, Stereotype Supt., Bridgeport (Conn.) *Herald;* Secretary-Treasurer, Walter C. Crighton, Comp. Room Supt., New London (Conn.) *Day.*

Northwest Mechanical Conference — 1952 Conference, Hotel Duluth, Duluth, Minn., September 20, 21 and 22. President, John Breen, Mechanical Supt., Duluth (Minn.) *Herald* and *News-Tribune;* Secretary-Treasurer, Ralph Carson, Dunwoody Industrial Institute, Minneapolis, Minn.

Pacific Mechanical Conference — 1953 Conference, Statler Hotel, Los Angeles, September 25, 26 and 27. President, Al Tennyson, Composing Room Supt., Los Angeles *Times* and *Mirror;* Secretary for the North, Edw. N. Conley, color press foreman, San Francisco *Chronicle;* Secretary for the South, Fred J. Moyer, Los Angeles *Daily News.*

Printing Industry of America—1952 Convention, Chase Hotel, St. Louis, October 13-16. President, Arthur A. Wetzel, Wetzel Brothers, 444 N. Broadway, Milwaukee 2, Wis.; James R. Brackett, General Manager, 719 Fifteenth St., N. W., Washington, D. C.

Research and Engineering Council of the Graphic Arts Industry, Inc.—1953 Membership Meeting, May 14 and 15, city and hotel to be announced later. 1954 meeting, May 11 and 12; 1955 meeting, May 12 and 13, city and hotel to be announced later. Special Makeready and Pre-Makeready meeting, Chicago, December 5 and 6, 1952. Hotel to be announced later. Next Executive Meeting, Hotel Cleveland, Cleveland, January 23, 1953. President Edward J. Triebe, Kingsport Press, Kingsport, Tenn.; Official Headquarters. Bernard J. Taymans, Managing Director, 719 Fifteenth St., N. W., Washington 5, D. C.

Screen Process Printing Association — 1952 Convention, Sherman Hotel, Chicago, October 25-29. President, John W. Key, Admiral Screen Print Corp., 627 W. Lake St., Chicago 6, Ill.

SNPA (Eastern Div.) Mechanical Conference — 1952 Conference, Andrew Jackson Hotel, Nashville, Tenn., August 25, 26, Chairman, W. D. (Red) Jacobs, Mobile (Ala.) *Press-Register;* Secretary, Ray B. Crow, Southern Newspaper Publishers Assoc., P. O. Box 1569, Chattanooga 1, Tenn.

SNPA (Western Div.) Mechanical Conference — Chairman, Frederic R. Rice, Little Rock (Ark.) *Democrat;* Chairman of Supply Men's Committee, Edwin Yagow, Goss Printing Press Co. City for 1953 meeting to be selected later.

Technical Assoc. of the Graphic Arts—1953 Meeting to be held in Washington, D. C. Hotel and dates to be announced later. President, John McMaster, Graphic Arts Div., Eastman Kodak Co., Rochester, N. Y.; Secretary-Treasurer, Paul J. Hartsuch, Printing Ink Div., Interchemical Corp., 161 W. Harrison St., Chicago 5.

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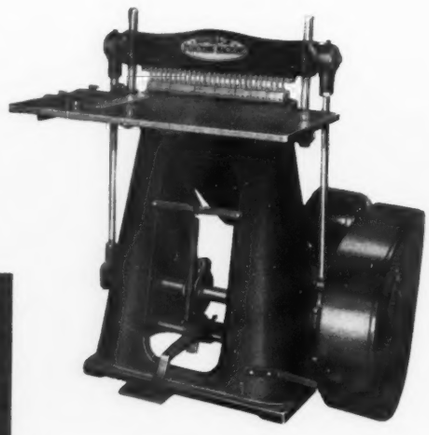

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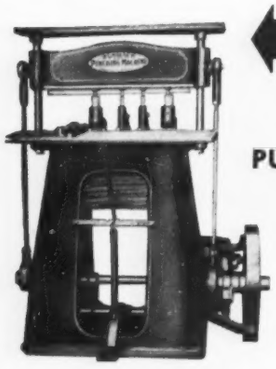

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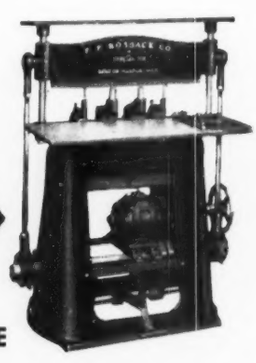

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Patents

For The GRAPHIC ARTS

Covering patents issued May 6, May 13 and May 20.

All new patents for the Graphic Arts are reported exclusively for Printing Equipment Engineer by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issued each week. Printing Equipment Engineer is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Composing Room Equipment

2,596,338. PRINTING SLUG SLICING AND SHAVING MACHINE comprises a reciprocable slug gripping vise with means for reciprocating said vise in successive forward and return directions in the same plane. A saw positioned above the vise transversely saws a slice from the slug lengthwise during the forward movement with the slice remaining gripped on the vise. A shaving blade is carried by a slidable member which is mounted on a member extending at right angles to the path of travel of the vise. A rotatable mechanism actuates the shaving blade slidable member and an adjustable link rod extends from the rotatable mechanism to the shaving blade slidable member. Invented by James D. Lithgow, Hamilton, Ontario, Can. Unassigned. Application July 16, 1948; in Canada July 23, 1947. 2 Claims.

Feeding, Folding, Delivery

2,595,630. SIDE GAUGE FOR SHEET FEEDERS is designed for handling sheets of cardboard being fed to a printing press. The feeder has a pair of cooperating top and bottom rollers between which the sheets move in their advance to the front guides of the press. Side guides effect side register of the sheets and a reciprocable pusher embraces one of the rollers at the side of the feeder remote from side guide and it engages the near edge of a sheet between the rollers for pushing sheet against side guide. The rollers are driven at a uniform speed and a plush covering on one roller provides a good sheet gripping surface. Invented by Frank R. Belluche, Racine, Wis. Assigned to The Christensen Machine Co., Racine, Wis. Application November 7, 1949. 5 Claims.

2,595,546. PNEUMATIC SHEET SEPARATING DEVICE uses an air blast nozzle assembly of the type found on printing presses having automatically adjustable tables for supporting piles of paper to be printed. A bearing block is rigidly attached to the press and carries a tubular blast nozzle. The discharge end of nozzle is notched, leaving an upper forwardly projecting wall having a concave-convex cross section for resting on the top sheet. The inner

end of notch ends near the edge of the paper pile so that when a blast of air is released, a part of the air will be above the top sheet and parallel to same producing an upwardly acting lifting force on paper. The remainder of the air forms a layer on which sheet may float. Invented by Alvin G. Sampson, Decorah, Iowa. Unassigned. Application August 7, 1950.

2,597,178. SHEET POSITIONING AND CLAMPING MEANS is for use in silk screen processes when sheets are to be printed with more than one color in accurate registry. A sheet gauge is mounted on the base of a silk screen frame. The gauge comprises an angular member having a pair of legs at right angles to each other. One of the legs is movable in a direction at right angles to screen surface while other leg is arranged parallel to silk screen surface. A solenoid including a plunger operates the movable leg. The solenoid is switch-controlled, said switch including operating means adapted to be engaged by silk screen frame upon movement of screen toward work supporting surface. Invented by Albert and Rose Pleydell, Bellerose, and Jean F. McIntyre, Flushing, N. Y. Unassigned. Application April 27, 1950. 3 Claims.

Miscellaneous

2,595,438. PAPER DRILLING MACHINE is useful for drilling holes through stacks of paper sheets. It incorporates durable hydraulic mechanism in a head of the machine in which the drill is also mounted for depressing the head. Such hydraulic mechanism is adapted to protect the drill against breakage or injury under abnormal operating conditions. All working parts of the machine are included in the head part of the machine and such part is controlled by a foot pedal near the floor part of the machine, all parts being mounted in a cabinet of suitable height. Invented by Joseph Adrian, Cleveland, O. Assigned to Super Speed Printing Machinery, Inc., Cleveland, O. Application September 30, 1948. 9 Claims.

Printing Inks

2,595,983. HEAT-SET INKS COMPRISING POLYVINYL TERPENE ETHERS are adapted for use in printing better grade magazines or papers made of practically non-porous stock. The ink contains coloring matter dispersed in a vehicle comprising a resinous binder component in solution in a solvent therefor which is nonvolatile at 70 deg. F. but which has a comparatively high vapor pressure at a temperature of the order of 200-240 deg. F. The major part of the resinous binder component is a resinous polymer of a vinyl ether of a terpene alcohol. The resinous polymer has a drop softening point of at least 130 deg. C. Invented by Walter S. Ropp, Wilmington, Del. Assigned to Hercules Powder Co., Wilmington, Del. Application August 25, 1950. 8 Claims.

Plate Making

2,596,115. SCREENED POSITIVE FOR USE IN PREPARATION OF INTAGLIO PRINTING PLATES. Method provides an intaglio etching having separated minute ink receiving wells of varying size and depth, depending upon

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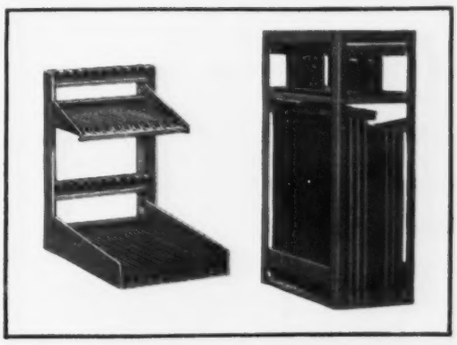

Hamilton PEAK-PRODUCTION equipment

HAMILTON MANUFACTURING COMPANY • Two Rivers, Wisconsin

the tone values, and in which the individual wells have their maximum areas at the printing surface of the etching and decrease in area from surface inward in a manner permitting complete removal of ink. This provides separate and distinct tone values and each size of dot with tonal values not hitherto possible. Invented by Lucien C. Austin, Newton, N. J. Unassigned. Application December 26, 1945. 4 Claims.

2,596,713. ANTIHALATION LAYER FOR CELLULOSE ESTER LITHOGRAPHIC PRINTING PLATES. A light-sensitive photographic element designed for use in preparing a lithographic printing plate comprises two sheets of fully esterified cellulose organic acid ester each from 0.003 to about 0.005 in. thick and laminated together. An antihalation dye layer is contiguous to the lamination interface and on one of the outer surfaces of one of the sheets a stratum of hydrolyzed cellulose ester is uniformly sensitized to light with bichromate. Invented by Gale F. Nadeau and Clemens B. Starck, Rochester, N. Y. Assigned to Eastman Kodak Co., Rochester, N. Y. Application February 9, 1949. 4 Claims.

2,596,715. PROCESS OF MAKING MORTISED PRINTING PLATES. The process of forming mortised duplicate plastic printing plates comprises locating a temporary insert block in the mortise opening of an original plate and forming a mold from said plate by pressing a sheet of thermosetting impregnated material onto the plate under heat and pressure to form a mold. The block is formed with portions adjacent the mold by which the block is located on the mold. The mold and block are removed from the plate and covered with thermoplastic material. It is subjected to heat and pressure to form a duplicate plastic plate with the temporary insert in the duplicate plate. The mortise opening is formed and the temporary insert is removed from the duplicate plate. Invented by Henry Oettinger, jr., Forest Hills, N. Y. Assigned to Electrographic Corporation, New York, N. Y. Application February 19, 1947. 3 Claims.

2,596,867. TUBULAR ROUTER is for routing printing plates of curved or tubular form. The construction uses a rotary drum on which a plate is mounted for routing and a motor unit which is slidably mounted on a bracket for vertical movement relative thereto and which extends freely through the bracket, the bracket moving on guides. A worm parallel to guides extends through the bracket. As worm is rotated, it so engages bracket that motor will move along the guides. A lever on bracket is engageable with worm to permit shifting of bracket and motor along guides independently of worm. Drum may be manually operated by a hand wheel independent of the worm. Invented by Robert E. Richards, Kalamazoo, Mich. Assigned to J. A. Richards Co., Kalamazoo, Mich. Application July 14, 1949. 4 Claims.

2,596,868. ROUTING MACHINE for printing plates uses a horizontal table on which an arm pivots in a horizontal path. A second arm on free end of first arm pivots in a similar path and carries a motor. The motor carries a routing tool. There is a control which is manually operable for operating the movement of the second arm. Such control is in the form of a collar about which a split ring is rotatably disposed. A control rod is secured to split ring and is movable therewith about a vertical axis. A threaded member is used for releasably securing the split ring against rotation relative to the collar whereby the control rod may be secured in any adjusted radial position relative to motor. Invented by John A. Richards, jr., Kalamazoo, Mich. Assigned to J. A. Richards Co., Kalamazoo, Mich. Application October 28, 1950. 3 Claims.

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Printing Presses and Equipment

2,595,413. CURVED PLATEN PRINTING PRESS comprises a main stationary frame and an oscillating frame pivotally mounted on the stationary frame. The oscillating frame is moved about a pivotal point toward and away from the stationary frame for impression purposes. A curved platen is mounted on one of the frames and a type bed on the other frame. A lever arm which is pivotally secured to the stationary frame has a slot which receives the pivotal point to move it along an arcuate path. The lever arm is actuated by cam operated means so the type form rolls against the curved surface of the platen in registry therewith. Invented by Charles F. Root, Cleveland, O. Assigned to The Chandler and Price Co., Cleveland, O. Application December 23, 1946. 5 Claims.

2,595,437. SHEET JOGGING MECHANISM FOR PRINTING PRESSES has a suitable support for receiving a stack of sheets and sheet aligning mechanism.

The aligning mechanism comprises spaced pairs of arms at opposite sides of the support, each arm of each pair being pivotally fast at one end to the frame above the support, opposite ends extending inwardly horizontally toward the sheet support. A bar is pivoted at each end to each pair of arms and an extensible rod is fastened to the bars, intermediate their ends, so as to extend across the sheet support. The arrangement is such that concomitant separation of the bars and longitudinal movement of same is effected and compound movement retracts sheet-engaging abutments from the end and sides of the pile of sheets. Invented by Roy F. Alberle, Portland, Me. Assigned to Southworth Machine Co., Portland, Me. Original application September 20, 1946. Divided and this application April 9, 1948. 4 Claims.

2,595,600. POWDER COATING ASSEMBLY is for use in spraying powder onto freshly printed sheets to prevent offset of the ink. The assembly includes a fitting having a powder atomizer and a powder container. The fitting has a bore for communicating with the atomizer and a channel to provide dual passages. One leads directly from a source of air under pressure to the bore and the other indirectly to the bore through the powder container. A pair of valves are coaxially arranged on the fitting for controlling air flow through the respective channels. Such valves are independently operable to vary the air flow through the respective channels for controlling powder flow to atomizer. Invented by Jens A. Paasche, Wilmette, Ill. Unassigned. Application August 18, 1949. 9 Claims.

2,596,189. METHOD FOR REPLACING WEB ROLLS IN PRINTING MACHINES provides for applying to the leading end of the web of a replacement roll an adhesive which will not adhere to the paper of the running web when brought into contact with same under deflection pressure but will adhere to same under a higher pressure. The rim of the replacement roll and the adhesive on same is brought into engagement with the web running from the expiring roll under deflection pressure to rotate the replacement roll at the speed of the running web, and then a higher pressure is applied on the running web and against the replacement roll to produce adhesion and effect the splice. Invented by William C. Wieking, Woodhaven, N. Y. Assigned to R. Hoe & Co., Inc., New York, N. Y. Application August 19, 1946. 12 Claims.

2,597,687. BED OPERATING MEANS is applicable to flat bed and cylinder presses for printing, cutting, creasing, and like operations. The construction includes a single driving shaft to which a crank for operating the press bed may be fastened, the driving shaft also carrying means such as a gear for driving the member which in turn drives the cylinder. The member is provided with gear teeth meshing with the teeth of the driving gear fastened to the driving shaft. The cylinder is preferably driven directly by the bed during the printing operation. This is accomplished by a rack on the bed meshing with a pinion on the cylinder or by conventional bed and cylinder bearers. Invented by Burt F. Upham, San Antonio, Tex. Assigned to Miller Printing Machinery Co., Pittsburgh, Pa. Application April 9, 1946. 1 Claim.

2,597,464. STENCIL PRINTING MACHINE includes a platen, above which a pair of rails is mounted which forms a track along which printing devices may be moved and a stack of printing devices is located to one side of the printing position with the lowermost printing device resting on platen and a slide member movable along the rail has an abutment thereon for engaging back of an edge of the lowermost printing device in the stack when moved in one direction along the rails. A movement of the printing roll toward the platen effects a movement of the slide member in direction as described. The slide member and an engaged lowermost stencil are moved in the stack toward printing position simultaneously with any movement of the printing roll away from the platen. Unassigned. Application February 26, 1949. 5 Claims.

2,597,472. PROCESS AND APPARATUS FOR MAINTAINING THE VISCOSITY OF INK THROUGH CIRCULATION. A process for maintaining a selected viscosity of volatile rotogravure or aniline base inks in an open printing press reservoir is disclosed. It comprises the steps of continuously withdrawing the ink from the reservoir, of agitating the withdrawn ink, of adding solvent to the withdrawn ink at a rate comparable to the rate of evaporation of the solvent and of continuously returning the solvent-fortified ink to the reservoir. Invented by John De Witt Gray, Evanston, Ill. Assigned to Gray-Mills Corporation, by mesne assignments, Evanston, Ill. Application February 15, 1946. 6 Claims.

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PRINTING PATENTS REPORT

Covering patents issued May 27, June 3, June 10.

Binding, Cutting, Perforating:

2,599,666. GUMMING AND PASTING MACHINE. Apparatus for pasting together a pair of edge portions of a pair of sheet members is used in the bookbinding trade. It comprises a rotatably mounted disk and means for rotating the disk. Plate is applied to the peripheral portion of at least one face of the disk during rotation. The disk projects between the confronting edge portions of the sheet members so that the edge portions are located on opposite faces of the disk and overlap a part of the peripheral edge. The sheet members are conducted away from the disk and joined at the edge portions by paste. Invented by Charles A. Surridge, London, England. Assigned to The Sulby Engineering Development Co. Ltd., London, Eng. Application August 31, 1949; in Great Britain September 3, 1948. 10 Claims.

2,600,215. WEB PERFECTING, FOLDING, AND CUTTING MACHINE WITH ENDLESS BAND PRINTING MEMBERS is claimed, in which a moving web of paper is printed on both sides, in cyclic sections, each section comprising all the pages for a complete book, unless unduly large, by means of type set on endless belts. The machine is also adapted to zig-zag or accordion fold cyclic sections into page sections and to cut the sections in a precisely arranged automatic operation. The sections or page blocks are bound by adhesively connecting the folds together and to a cover. The arrangement is such that at each impression, all of the printed matter required for one ordinary book containing 350 to 400 pages is provided, and by means of synchronously operated folding and cutting mechanism, a book is ready for the binding operation. Invented by Luis de Florez, New York, N. Y. Assigned, by mesne assignments, to The de Florez Company, Inc., New York, N. Y. Application January 4, 1947. 3 Claims.

Composing Room Equipment:

2,597,955. ESCAPEMENT MECHANISM for a typographical composing machine includes, in combination, a plurality of escapement levers arranged side by side. The levers are mounted to rock in a curved path and formed at front and rear ends with lower convex surfaces. A corresponding plurality of independent pairs of rollers are provided upon which the escapement levers rest by gravity and by which they are supported in place. The rollers of each pair are arranged in rolling contact with the front and rear lower convex surfaces of the corresponding escapement lever. Invented by Richard H. Scott, Hale, and Arthur S. Hayward, Altrincham, Eng. Assigned to Linotype and Machinery Ltd., London, Eng. Application April 26, 1947; in Great Britain April 29, 1946. 6 Claims.

2,597,956. ESCAPEMENT MECHANISM controls the release of matrices from the magazine of a typographical composing machine. The mechanism comprises an escapement lever movable from a matrix-holding position to a matrix-releasing position and return and a reciprocatory member to actuate the escapement lever in one direction. The actuating member is disposed below the escapement lever and presents a supporting surface upon which the lever rests by gravity both when the lever is at rest and during its actuation. Invented by Richard H. Scott, Hale, and Arthur S. Hayward, Altrincham, England. Assigned to Linotype and Machinery Ltd., London, Eng. Application May 9, 1947; in Great Britain May 11, 1946. 8 Claims.

2,600,168. PHOTOPRINTING DEVICE features a high duty cycle and a high printing speed with a printing lamp of conventional type for use with electronic phototype composing systems. System comprises a member carrying a plurality of characters, a beam source and a first optical means forming a beam path between characters and beam source. The beam path includes reflectors movable on perpendicular axes so as to direct the beam to a desired character. A second reflector back of the characters reflects each character in reverse along beam path. A second optical means including a third reflector is placed in the path between source and first reflector. Invented by Battle H. Klyce, Stamford, Conn. Assigned to Time, Inc., New York, N. Y. Application March 26, 1949. 18 Claims.

Feeding, Folding, Delivery:

2,598,323. FOIL FEEDER FOR PRINTING OR EMBOSSING MACHINES is

LABORATORY TESTS

assure you of a perfectly finished surface and smooth, fast etching, when you use ZOMO ELECTRIC ZINC and A-Z ALLOY.

For best results, specify these metals when ordering from your supplier.

for applying gold or silver lettering to book fronts. Drive and transmission shafts and a train of gears are suitably mounted in a casing or frame so as to drive feed rolls and to guide strips or webs of silver or gold foil through the casing and into engagement with a strap and die. Invented by Harold K. Wagar, Takoma Park, Md. Unassigned. Application January 13, 1947. 12 Claims.

2,600,284. **APPARATUS FOR INSERTING SUPPLEMENTARY SHEETS IN NEWSPAPERS** provides for applying sheets or folded supplements to a traveling web, at points spaced at regular intervals lengthwise of the web along a predetermined path. The sheets are then successively delivered to the web at one location along the path with the sheet deliveries timed recurrently to place the sheets at the points with spaces between successive sheets and at the location pressing the contacting areas of the sheets and web together. Invented by Reginald F. W. Tranter, Wellesley, Mass. Assigned to Boston-Herald-Traveler Corp., Boston, Mass. Application March 1, 1947. 3 Claims.

2,600,356. **SHEET FEEDER** is for taking sheets from the forward end of a feed board and transferring them to grippers of a rotating printing press. The device includes an intermittently rotating sheet receiving cylinder having a stationary period, nipper rolls for feeding sheets to the sheet receiving cylinder, and continuously meshing gear connections between sheet receiving cylinder and one of the nipper rolls for driving the latter at a surface speed greater than that of the receiving cylinder. Means are included for pressing nipper rolls into sheet feeding relation during the stationary period of the sheet receiving cylinder. Invented by James R. Wood, Cleveland, O. Assigned to Harris-Seybold Company, Cleveland, O. Application June 9, 1948. 9 Claims.

Miscellaneous:

2,598,761. **THE COMPOSITION** is for coating glue-glycerin printing rollers during the course of rendering them nonmeltable. It consists of hexamethylethylene-tetramine, lanolin, and glycerine, in proportions of one part, six parts and two parts, respectively. Invented by Lloyd W. Conklin, Toronto, Ontario, Can. Unassigned. Application November 9, 1948. 1 Claim.

Printing Inks:

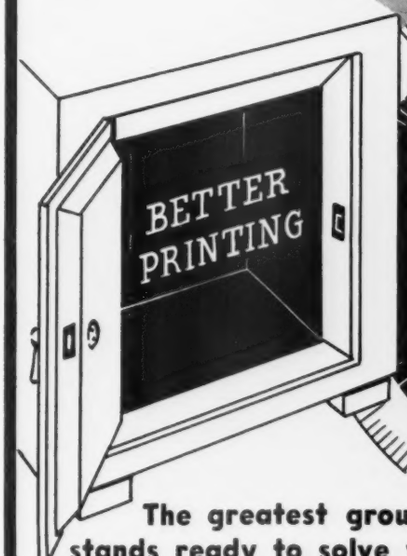
2,597,865. **FINISHING VARNISH FOR APPLICATION OVER LITHOGRAPHIC INK** consists of an organic solvent soluble alkyd resin admixed with a drying oil as a film forming ingredient and a volatile organic solvent mixture for the ingredient. The mixture is miscible with the ink vehicle and contains from 1 to 17 percent by weight, based on the finished varnish, of ethylene glycol as an ink pigment flocculating agent and sufficient coupling agent to maintain the ingredients in a single liquid phase. Invented by Paul W. Greubel, Great Neck, N. Y. Assigned to American Can Co., New York, N. Y. Application April 8, 1948. 22 Claims.

2,597,863. **FINISHING VARNISH FOR APPLICATION OVER LITHOGRAPHIC INK** comprises, in combination, an organic solvent soluble alkyd resin as a film forming ingredient and from 2 to 13 percent by weight, based on the finished varnish, of an oil immiscible-water soluble polar liquid consisting of lactic acid as an ink pigment flocculant. A volatile solvent for the resin is miscible with the ink vehicle and contains sufficient coupling agent to maintain the ingredients in a single liquid phase. Invented by Paul W. Greubel, Great Neck, N. Y. Assigned to American Can Co., New York, N. Y. Application April 8, 1948. 18 Claims.

2,597,903. A **PRINTING INK** with high humidity tolerance capable of being set by steam is composed by coloring matter dispersed in a vehicle comprising a major part of by weight, a polyhydric alcohol having 2 to 3 hydroxy groups and 2 to 6 carbon atoms. A binder is dissolved in the vehicle which is a reaction product produced by heating substantial portions of shellac and a solid polybasic carboxylic acid having more than 3 carbon atoms. The acid contains only C, H, and O at 100-150° C. Invented by Alfred F. Schmutzler, Teaneck, N. J. Unassigned. Application September 30, 1949. 10 Claims.

2,599,633. **METHOD AND APPARATUS FOR MAKING PRINTER'S INK.** In a method disclosed for making printer's ink containing carbon black dispersed in oil, a traveling solid surface picks up and carries a film of the oil and a smoky flame is directed onto the film. Invented by Hubert G. Hoffmeister and Arthur H. Soane, London, England. As-

COMBINO-CUSHION CORK? TOP-CUSHION CORK-FOUNDATION? FELT-FOUNDATION? TOP-TINGUCORK-FOUNDATION? STERLING-KORKER-FOUNDATION? GOLD TYMPAN-FELT-FOUNDATION? COMBINO-TINGUCORK?



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TOP Drawsheet is firm, durable, economical and of long life. Gauges .016", .025", .033".

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IMPROVED SATISFACTION—A fabric impregnated with "Neoprene" and coated with "Calvaprene." Gauges .024", .026", .030".

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CUSHION CORK*—A highly resilient underpacking. Gauges .059" to .085".

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signed to Usher-Walker Ltd., London, Eng. Application May 1, 1948; in Great Britain, March 16, 1948. 18 Claims.

Platemaking:

2,598,043. PROCESS OF PREPARING PLANOGRAPHIC PRINTING PLATES. A process is disclosed for preparing aluminum planographic printing plates which includes electrolytically etching a surface of sheeted aluminum in an electrolytic etching bath. The bath comprises an aqueous solution of a chloride selected from the group consisting of sodium, potassium, magnesium, lithium and calcium chlorides and having a hydrogen ion concentration of pH from about 2 to 4 produced by hydrochloric acid. An oxide deposit is then formed on the etched surface by subjecting the surface to the action of boiling water for a period of 3 to 5 minutes whereby the aluminum surface turns brown. Invented by Frank L. Eichner, Hollis, N. Y. Assigned to Reynolds Metals Co., Richmond, Va. Application February 20, 1947. 3 Claims.

2,598,189. PHOTOGRAPHIC PRINTING PLATE of the intaglio type is made by preparing a support having on one surface a heavy base coating of a hydrophilic colloid, a relatively thin intermediate coating adhering to the base coating and comprising water-soluble, photosensitive carboxy methyl cellulose and an arabin composition. A top coating similar to the base coating is applied and the three coatings are photosensitized and image defining areas are exposed on the photosensitized coatings so as to produce water-insoluble, grease receptive printing areas and water-soluble, grease repellent non-printing areas. A greasy film is applied to the top coating; then washed off the non-printing areas and the whole is again washed to effect swelling of unexposed areas of base coating to a level above printing areas of top coating. Invented by William G. Mullen, Winchester, Mass. Assigned, by mesne assignments, to A. B. Dick Co., Village of Niles, Ill. Application March 26, 1948. 8 Claims.

2,598,253. TOOL DRIVING MEANS AND CONTROL THEREFOR. Tool mechanism is for forming depressions in the surface of a printing plate. The device indents the surface in accordance with electrical impulses. It includes an indenting tool and a mount therefor having means for being reciprocated perpendicular to the surface. The indenting tool moves in accordance with the amount of current supplied to magnetic means. A spring arrangement secured to the tool and extending beyond its working end prevents work engagement when the magnetic means is inactive. Invented by Otto W. Greenberg, Ocean City, N. J. Unassigned. Application April 19, 1947. 3 Claims.

2,599,542. ELECTROPHOTOGRAPHIC PLATE comprises a conductive backing plate having a surface characterized by a pattern of alternate projections and depressions. The surface has between 1600 and 160,000 depressions to the square inch. The depressions are filled with a coating of photoconductive insulating material and have a smooth outer surface no higher than 5 mils above the projections. Invented by Chester F. Carlson, Woodside, N. Y. Unassigned. Application March 23, 1948. 5 Claims.

2,599,914. ETCHING PROCESS deals with the etching of the chromium from a combination of a base metal, such as copper, and chromium on a lithograph plate. Process comprises subjecting the surface to etching by applying thereto a solution containing aluminum chloride as its active ingredient and a salt selected from the group comprising zinc chloride, stannic chloride and ferric chloride as another ingredient. Invented by Paul J. Hartsuch, La Grange, and Carl Wachtl, Evanston, Ill. Assigned to Lithographic Technical Foundation, Chicago, Ill. Application January 4, 1950. 3 Claims.

2,600,295. PHOTOENGRAVING EQUIPMENT is for use as a photocomposing machine or cylinder step-up machine. The machine is fully automatic and has a light source which travels in a cylindrical path concentric with the sensitized cylinder at a uniform rate of speed so that during any selected exposure interval the light will always be positioned at the same distance from every part of the sensitized surface for exactly the same length of time, producing absolutely uniform exposure throughout the exposed area. Invented by Theodore Hommel, Webster Groves, Mo. Assigned to Universal Match Corp., St. Louis, Mo. Application December 4, 1948. 16 Claims.

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Printing Presses and Equipment:

2,597,932. ROTARY PRINTING MACHINE WITH REVERSIBLE PRINTING UNIT. This printing machine has a plurality of individual printing units. One unit comprises a first impression cylinder having a shaft, a sprocket wheel and first and second gears on the shaft. A second impression cylinder has a shaft and a first and second gear. Reversing mechanism for the gears is included. Invented by William F. Huck, Forest Hills, N. Y., and Anton Stobb, Union Township, Hunterdon County, N. J. Assigned to R. Hoe & Co., Inc., New York, N. Y. Original application February 15, 1945; divided and this application July 17, 1946. 2 Claims.

2,598,726. RESILIENT BEARER STRUCTURE FOR ROTARY PRINTING PRESSES includes a blanket cylinder, a rigid cylindrical bearer for the blanket cylinder at each end and an impression cylinder coacting with the blanket cylinder. A rigid cylindrical bearer for the impression cylinder cooperates with the corresponding bearer for the blanket cylinder to support the blanket cylinder against radial movement toward the impression cylinder. The bearers for the impression cylinder are resiliently supported for radial movement with respect to the impression cylinder. The support acts to resist yieldably movement of the bearers for the impression cylinder in any radial direction. Invented by Laszlo M. Stempel, New York, N. Y. Assigned to Laszlo M. Stempel, New York, and Albert Charles Nolte, Plandome, N. Y., as joint trustees. Application May 27, 1948. 8 Claims.

2,599,417. PLATE-STRAINING MECHANISM FOR USE IN PRINTING MACHINES is for use with flexible printing plates which are applied around the periphery of a printing cylinder having a longitudinal slot in its periphery. Guide blocks in the slot provide a series of fixed locating surfaces transverse to the length of the slot. The printing plate has bars secured at the underface of same at its ends. The bars have a series of transverse locating surfaces and have endwise movement for locking engagement with the fixed locating surfaces. Mechanism housed in the slot urges the bars toward one another to strain the plate about the cylinder. Such mechanism comprises individually operable pressure components which are contained in the slot and disposed to engage remote faces of the bars so as to thrust the bars toward one another by a wedging action. Operating screws are placed between the guide blocks to actuate the pressure components. Invented by Leslie Chamberlain Seed, Leeds, Eng. Assigned to R. Hoe & Co., Inc., New York, N. Y. Application filed September 1, 1948; in Great Britain September 3, 1947.

2,599,776. SHEET GRIPPER STRUCTURE AND SETTING MEANS THEREFOR comprises an operating shaft for supporting a series of grippers, each unit including a gripper finger support mounted for free movement about the axis of the shaft and a bracket rigidly secured on latter. A pad co-acts with gripper finger and there is a spring between support and bracket. By adjusting the tension of the spring, the pressure of the gripper finger on its associated pad is varied to thereby preload the bite of the finger. A cam is associated with operating shaft for closing the gripper finger onto its coacting pad. The spring acts on the shaft for opening the finger. Invented by Henri E. Peyrebrune, River Forest, Ill. Assigned by mesne assignments, to Miehle Printing Press and Mfg. Co., Chicago, Ill. Application May 24, 1947. 5 Claims.

Appointed Distributor

The Graphic Machinery Div. of Parsons & Whittemore, Inc., has been appointed sole distributor in the United States and Canada for the M.A.N. Automatic Matrix Molding Press. Platen size of the M.A.N. Press is 24 in. by 30 in. and pressure capacity is 770 T. A feature of the machine is automatic pressure control from zero to full tonnage. At the same time, Frank H. Galway, General Sales Mgr. of Parsons & Whittemore, announced the appointment of Charles Fritschi as Manager of its Stereotype and Electrotype Machinery Dept. Fritschi formerly was general manager of the Stereotex Machinery Co.

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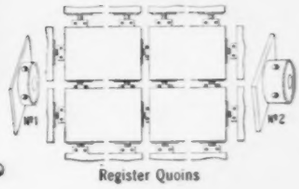
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Economy Vertical Miterer

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Make-Up Rule

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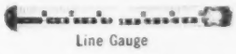
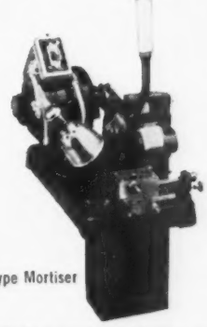

Line Gauge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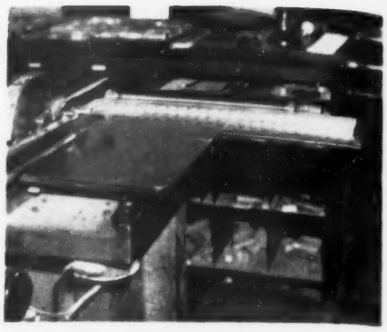
Galley Modified for Saw Extension Gauge

IN THE composing room at Nela Press, Cleveland, a locally contrived extension gauge for a saw trimmer enables workers to cut lengths of machine cast strip material and rules up to 144 picas in length. While Nela's mechanical executives were aware that such attachments for saws are available, the need for one arose when the time element failed to permit its delivery for the purpose at hand. Its use is limited and is confined to cutting of these standardized long lengths for use in the plant.

This extension attachment is mounted on a Hammond Trim-O-Saw and consists of a 7 in. by 11½ in. brass galley turned upside down. It is attached from beneath by two wing screws to the gauge base. The adjustable side guide or finger on the gauge clears the attached galley up to its 100 pica capacity inasmuch as the top of the galley (or what is normally referred to as the bottom) is mounted flush with the top surface of the saw's work table.

A permanent side guide 144 picas from the cutting point of the saw blade, has been attached to the left-hand top side of the galley. When it is necessary to cut 144 pica lengths, the operator removes the adjustable side guide or finger on the gauge and banks the material to be cut up against the permanent side stop at the left.



Back view of a Hammond Trim-O-Saw to which is attached at right a galley designed to serve as a saw extension for cutting lengths of material up to 144 picas. The extension attachment is in use at Nela Press, Cleveland.

If a 141 pica length is desired, the operator places a piece of 3 pica wide metal furniture up against the permanent side guide which automatically reduces the distance between the guide and the saw blade to 141 picas. The material to be cut is placed against the metal furniture and the cut made in the conventional manner. The same procedure is followed when cutting lengths down to 100 picas, where it is possible to use the standard movable side guide on the gauge.

Composing Room Foreman Harry Hulland, explains that metal furniture is used in preference to wood furniture because of its known accuracy. Where wood will warp and become distorted and worn, steel will not.

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Obtaining the Exact Count

IT IS sometimes necessary to wrap a job for shipment with exactly the same amount of sheets in each package. Some customers also specify that when a job is to be padded, each pad must contain the same number of sheets. It has been found that stabbers used in the bindery for this operation are not always accurate. A sure way of obtaining the exact count is to lock a numbering machine at the foot of the form being printed. The stock for the job is cut ¼ in. longer than required and the job is printed. Divider sheets or cards can be placed between the numbered sheets depending upon the amount required and the ¼ in. numbered part trimmed off on the paper cutter. The same procedure is followed for padded jobs, only the padding compound is applied before trimming.—Reported by Herbert Ahrendt, Vice President, Ahrendt, Inc., New York, N. Y., before Cleveland Craftsmen's Club.

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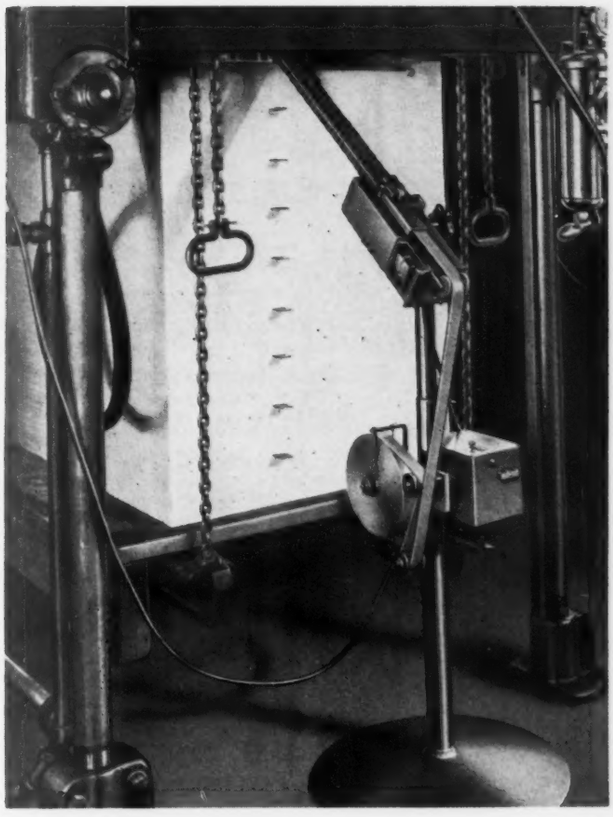

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This compact, portable unit automatically *counts* and *marks* sheets being stacked at the delivery end of presses, sheeters, die cutters, etc. Costly hand counting is eliminated—absolute accuracy is insured.

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EXECUTIVE Cs

On Tuesday, July 8, it was announced by Publisher John S. Knight of the Detroit *Free Press* that Leslie J. Griner had been appointed *Free Press* Production Mgr. and Production Engineer for Knight Newspapers. Griner resigned his position with the Detroit *News* in May effective July 1. He has been Production Mgr. of the Detroit *News* for the past five years. He is 47, is married and lives at 18096 Roselawn Ave., Detroit. It was also announced that Henry Lentz will continue as *Free Press* mechanical superintendent and with Griner will supervise a $2 million modernization and expansion project of the pressroom and other *Free Press* facilities. Mr. Griner has been a

Leslie J. Griner has been named Production Mgr. of the Detroit *Free Press* and Production Engineer for all Knight Newspapers. Announcement was made by Publisher John S. Knight on July 8. Griner is a resourceful and capable production and mechanical executive.

member of the ANPA Mechanical Committee since 1940 and chairman of the Committee since 1950. Previously, Griner served as mechanical superintendent of the Youngstown (O.) *Vindicator*, the Chicago *Sun* and the Fort Wayne (Ind.) *News-Sentinel*. He is a member of the American Society of Industrial Engineers and the Engineering Society of Detroit. Griner has developed and invented a number of mechanical devices which have contributed to the betterment of newspaper printing in the face of rapidly rising production costs. He also has had considerable experience in newspaper plant construction and equipment installations. His career in the mechanical and production sides of the newspaper printing industry has been one of constructive accomplishment.

Ray M. Coughlin, a Graphic Arts technical representative for Eastman Kodak Co., has retired after serving Kodak customers in Detroit for 18 years. Kenneth I. Waughstal will replace Coughlin in the Detroit territory, according to William E. Barr, General Mgr. of Kodak's sensitized goods sales division. Waughstal presently serves a territory that includes Toledo, Ohio, and all of Michigan excluding Detroit. He will cover the Detroit area in addition to his present territory.

Howell G. Evans, (left) formerly vice president in charge of sales, has been elected to the new position of Senior Vice Pres. by the Board of Directors, Hamilton Mfg. Co., according to an announcement by E. P. Hamilton, President. R. G. Halvorsen, (center) formerly sales manager of the company's Contract-Distributor Div., succeeds Evans as Vice President in Charge of Sales. Halvorsen will be directly responsible to Evans, whose principal duties continue in the sales function of the business but who now will devote a larger portion of his time to long-range sales planning and

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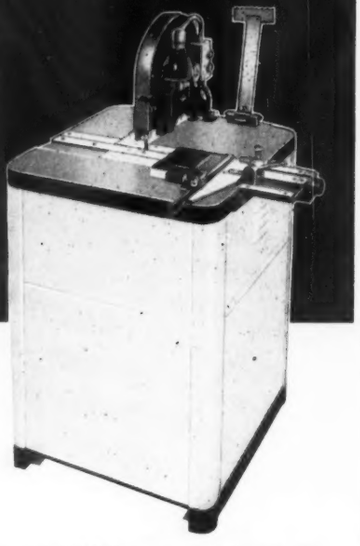
overall policies. The Board of Directors also created the new post of Vice President in Charge of Research and elected C. S. O'Neil (right) to that position.

Robert E. Sibley retired on June 30, after 45 years as sales and advertising manager of Leiman Bros., Inc., Newark, N. J., manufacturers of air pumps, sand-blasting, polishing and dust collecting equipment. Mr. Sibley is credited wth expanding the company's activities from its original line of jewelry equipment, into its present line of products for the dental, printing and industrial fields. Mr. Sibley was honored at a testimonial dinner given him by officials and co-workers in commemoration of his long service and many contributions to the company's progress.

In recognition of 25 years of service and leadership, Ernest E. Jones, President of Graphic Arts Corporation of Ohio, was awarded a beautifully engraved watch at a gathering in June of that company's supervisory and sales personnel. The presentation was made by Bernard Sears, Executive Vice Pres. and General Mgr. Mr. Jones purchased the original Graphic Arts Co. in 1927. Mr. Sears, whose association pre-dates this purchase, has had an opportunity, under Mr. Jones' management, to watch Graphic Arts' growth from an original four man engraving plant to what is said to be the largest and most modern trade plant in the country. The service to the trade, for which Mr. Jones has planned and worked, includes advertising art, commercial photography, photoengravings for the letterpress printer, originals and plates for the offset-lithographer, as well as positives for the gravure printer. A branch plant is maintained in Detroit, with offices in New York and Chicago.

President Ernest E. Jones (right) is presented with gold watch by Bernard Sears, Exec. Vice Pres. and General Mgr., in recognition of 25 years of leadership with Graphic Arts Corporation of Ohio (Toledo, O.). Presentation was made in June.

NOW!
TWO ROUSE TIME-SAVING
PLATE SAWS
With Exclusive Automatic Feed
For Photoengravers, Stereotypers, Printers



No more manual squaring up, guesswork alignment, tacking, scoring, beveling, trimming, removing burrs, using wedges. That's how a Rouse Plate Saw soon pays for itself.

Just make 4 quick, easy, automatic saw cuts and your plate is ready for the printer. The *exclusive* automatic feed guarantees each cut to be perfectly square, smooth-edged and uniform on any copper, zinc, magnesium or plastic plate, whether wood or plastic mounted or shellcast.

Cuts are made to Picas, Points, Quarter Points or Inches as required. Outside Mortising is effectively done to pica and point measurement.

NEW 24" MODEL—automatically cuts up to 24" of type-high work in only 27 seconds.

15" MODEL—identical to 24" Model except it automatically cuts up to 15" of type-high work in only 17 seconds.

BOTH MODELS occupy only 26" x 26" floor space.

NEW FEATURES (*on Both Models*)

1. Now you can make *cuts as small as 1 Pica square* for signatures, key letter or number changes, etc.

2. *Narrow Cut* measures about 2 points (.028"), permitting cutting between type lines.

3. Saw blades are changed in just 1 minute due to new lever-operated tension release. Blades stay sharp during 30-40 hours continuous operation. New blades are inexpensive.

4. New simplified gauge adjusting device makes it easier to maintain perfect squareness in cutting.

DESIGNED BY MEN WITH 25 YEARS KNOW-HOW IN BUILDING BAND SAWS FOR PRINTERS

Write for complete details TODAY!

H. B. ROUSE & COMPANY
2214 North Wayne Avenue, Chicago 14, Illinois

ROUSE PRODUCTS...The Standard of the World Since 1899

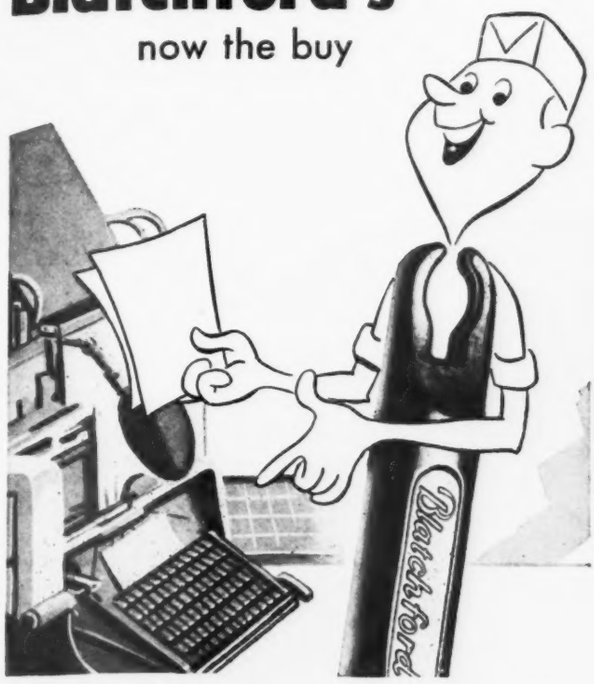
Samuel M. Burt, Asst. Managing Director of the Research and Engineering Council, with office in Washington, D.C., will work with Managing Director Bernard J. Taymans. Burt was formerly associated with Educational Testing Service, Princeton, N. J., as a printing buyer. Also he has been Director of Printing Institute, Philadelphia. He has been active in local and national Graphic Arts educational activities. Pleasant spoken and amiable, it is anticipated he will be a valued member of the Council.

The appointment of John F. Daunt, Boston, to the Sales and Service Dept. of the Monomelt Company, has been announced by Chesley F. Carlson, Sales Mgr. Daunt has served in supervisory capacities in both electrotype and plastic platemaking plants. He is a member of the Boston Club of Printing House Craftsmen, and has served as an elected official of Local No. 1 of the Intl. Stereotypers and Electrotypers Union. Daunt has been connected with the platemaking trade for over 25 years in the New England area and the East.

See why

Blatchford's

now the buy



Today, with costs soaring, your men and your machines must produce to capacity to earn you a profit.

For example, consider the performance of your metal stock. If it is operating below par, here are three reasons to "go Blatchford."

First, Blatchford gives you clean, solid casts. It melts smoothly, flows freely, molds sharply. *Fewer imperfect casts... greater operating efficiency!*

Second, Blatchford Metal gives you a slug or plate that's true to the mold. And its fluidity helps you "get" every detail of mat or matrix. *Less porosity... sounder plates!*

Third, Blatchford Metal gives you long, steady, clean press runs. It stands the gaff. *More dependable performance... fewer press stops.*

Built to save, every step of the way, Blatchford can help your skilled manpower and expensive machinery produce to capacity.

Try Blatchford. See for yourself how it can help raise your production... lower your costs.

Free chart for remelt rooms tells, step by step, how to keep metal "healthy" and *cut dross loss* with Blatchford Type Metal Flux. Just write, Box PE-8, the Blatchford office nearest you for "Re-melt Chart."

NATIONAL LEAD COMPANY—Atlanta, Baltimore, Chicago, Cincinnati, Cleveland, Dallas, Philadelphia, Pittsburgh, St. Louis; New York: E. W. Blatchford Co.; New England: National Lead Co. of Mass., Boston; Pacific Coast: Morris P. Kirk & Son, Inc., Los Angeles.

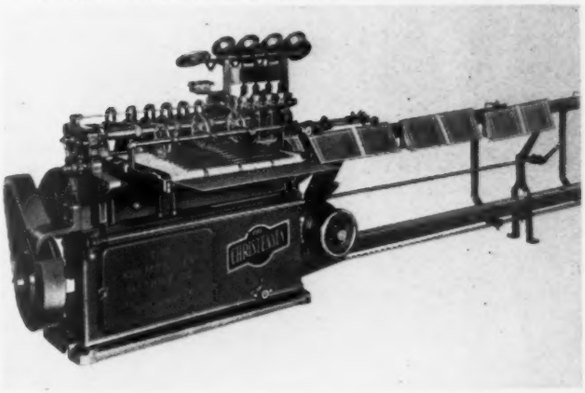
Blatchford

is the NATIONAL name for dependable metal...

*Reg. U. S. Pat. Off.

Speeds Booklet and Catalog Production...

even in the Smallest Binderies



The Christensen Gatherer and Stitcher

To keep jobs moving through to completion without costly delays, your gathering and stitching must keep pace with your high speed folders.

In the smallest, as well as the largest binderies, the Christensen Pony Gang Stitcher matches the speed of the modern folder; gathers and stitches in a single operation at up to 9,000 signatures an hour — sizes from 2½ x 5″ to 12 x 27″.

This machine works quietly, accurately and economically — as fast as operators can feed it — and delivers the product neatly stacked.

When booklets of one signature are to be stitched, signatures may be placed on the saddle by one girl; or if two girls are used, the machine may be sped up and each girl drops a signature on every other carrier, thus getting full production from the machine.

For *multiple signature booklets* one girl for each signature is placed at each station. Signatures are gathered until book is complete, after which it is stitched automatically.

Ask us to show you how the Christensen Gatherer and Stitcher can expedite work passing through *your* bindery, at the same time effecting economies you can hardly afford to overlook.

Dexter Folder Company

General Sales Offices

330 West 42nd Street • New York 36, N. Y.

Chicago • Philadelphia • Boston
Cleveland • Washington • St. Louis

Robert A. Schwer has joined the type metal sales force of the Blatchford Div., National Lead Co., according to an announcement by Millard L. Friday, Sales Mgr. Schwer will cover western New York State and part of Pennsylvania.

Herbert Krause has been appointed Sales Mgr. of Martin Driscoll & Co., succeeding Roy Counihan who has retired for reasons of health after more than 25 years service. Krause has been with the Chicago ink firm for 22 years. The changes were announced by James D. Yates, Vice Pres.

Martin Driscoll, 72, President of Martin Driscoll & Co., ink manufacturing firm which he founded in Chicago in 1918, died June 6, 1952. In addition to his widow, Mrs. Ann Driscoll, he is survived by three sons, Stephen, Robert and William, all active in the business, and three daughters. Mr. Driscoll was a director and past president of the National Assoc. of Printing Ink Makers. He was active in the Chicago Printing Ink Makers Assoc., Chicago Club of Printing House Craftsmen, and the Printers' Supplymen's Guild of Chicago.

The William C. Herrick Ink Co., Inc., has announced the appointment of Murray L. Blau as its representative in the New York Metropolitan area. Blau will specialize in offset inks. Prior to joining Herrick, he held such positions as pressroom superintendent of Peter F. Mallon, Inc., and demonstrator and serviceman for Electron Lithoplate Corp. He is a journeyman pressman, a member of the Litho Club of New York and a member of the Club of Printing House Craftsmen of New York.

Everett L. Mills has been promoted to Asst. Sales Mgr. of Howard Flint Ink Co. Mills, a graduate of Amherst College, has been associated with the Flint organization for six years. At the same time, it was announced that Julian Carmichael has been named Flint Branch Mgr. in Atlanta, Ga., and John Millward has been appointed Manager of the Flint factory in New Orleans, La. Millward succeeds Mr. Mills in this position.

● Because of their greater plasticity, BURGESS MATS mold with less pressure and retain every detail, including the finest halftone dots. When molded, these sensitive mats hug the outlines of the form and reach into the most minute interstices without fracture of the fibers.

The result—stereotypes which reproduce line and halftone with incomparable fidelity.

BURGESS CELLULOSE COMPANY
Manufacturers and Distributors of Burgess Chrome and Tone-Tex Mats
Freeport, Illinois

A Laboratory Product
BURGESS Chrome MATS

Link-Belt Co. announces appointment of James H. Oakes, former sales manager for enclosed drives, as sales manager for the company's Philadelphia plant. At the same time announcement was made of the appointment of Byron K. Hartman, former assistant sales manager at Philadelphia, as sales manager for the new Colmar plant which will begin manufacturing operations later this year in Colmar, Pa., north of Philadelphia.

J. H. OAKES

B. K. HARTMAN

Dr. J. Henry Holloway, honorary life member of the Club of Printing House Craftsmen of New York, Inc., and a past president and director of the Intl. Graphic Arts Education Assoc., passed away recently. Funeral services were held in Framingham Centre, Mass., on June 24. Burial was on June 25 in Kensico Cemetery, Kensico, N. Y.

THE STAR SELF-ACTUATING FEEDER

CURES THAT TROUBLE

With the limited wattage in the standard Linotype or Intertype electric pot only a limited amount of metal can be melted in a given time. The feeder must feed only enough metal at one time to be melted by the available heat units before the lowered level calls for more cold pig. If a large slug is being cast, the ordinary feeder is feeding too much pig at one time to be melted before the lowered pot level calls for more metal.

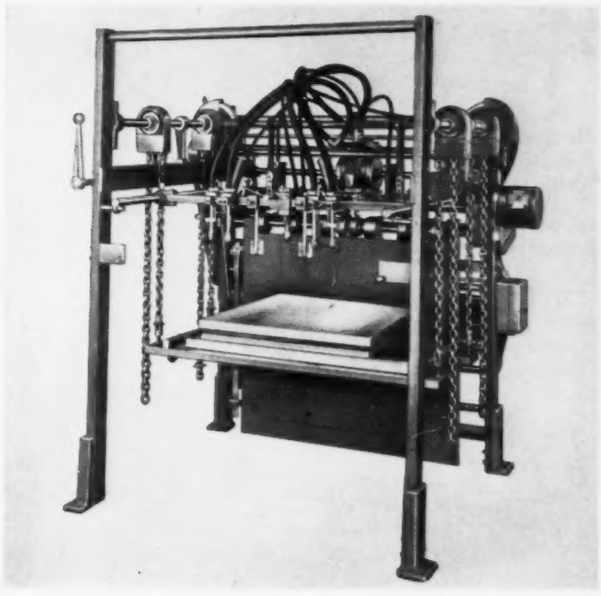
Not so with the STAR FEEDER . . . it feeds the cold pig in smaller doses so that the available wattage can melt it before the cycle is completed. It does not depend on any lever of the machine for actuation. It is controlled only by float and brake.

Send for the detailed description

PRECISION
TRADE ★ MARK

LINOTYPE PARTS COMPANY
INCORPORATED
Factory and Main Office
SOUTH HACKENSACK, N. J.
Branch Office: 1327 BROADWAY, KANSAS CITY 6, MO.
CHICAGO • MINNEAPOLIS • DENVER • NEW YORK • BOSTON

Dexter
Continuous Reloading
Metal Sheet Feeding



means Fewer Stops, More Uniform Quality, and Increased Production!

The Dexter Metal Sheet Feeder automatically feeds sheets to press, coater, slitter or other machine. It handles stock from 38 to 24 gauge, 36 x 44″ to 14 x 16″, loads up to 6,000 lbs. • The feeder automatically separates and picks up metal sheets from pile and advances them to registering or feeding-in point • Reloading mechanism eliminates need of stops to reload • Should two sheets adhere, reject mechanism diverts them to reject tray without stopping machine or slowing down production • Fewer stops and less tripping make for work of more uniform quality • There is no marking or scratching of sheets • Stock may be trucked into feeder by either electric or hand lift trucks or by means of floor load conveyors • Feeders can be supplied to handle up to 16 gauge, 48 x 144″ and 30,000 lb. load • Write for literature

Dexter Folder Company
General Sales Offices
330 West 42nd Street • New York 36, N. Y.
Chicago • Philadelphia • Boston
Cleveland • Washington • St. Louis

Jack Gerrard has been appointed to the sales-service staff of Mosstype Corporation, Brooklyn, maker of rubber printing plates. Formerly, he was manager of the company's production department. It was also announced that Murray Kessler has been promoted to the position of Production Dept. Mgr. Henry Salmaggi has been made assistant to Mr. Kessler.

The appointment of Fillmore Hyde as director of the newly organized Office of Publications and Printing of New York University has been announced by James W. Armsey, assistant to the Chancellor of the University. Mr. Hyde's office, formed by consolidating the previous office of the Supervisor of Printing and the unit known as the duplicating department or University print shop, will be responsible for designing, scheduling and processing all of the University printing, whether the jobs are produced outside the University or with its own printing equipment. Miss Jean Barr, who has been supervisor of printing and director of the University Press, will devote her entire time to the latter activity. John J. Winters will continue as supervisor of the University print shop. Miss Lillian Geldorf will be in charge of both the production and purchasing of the new organization.

Leslie P. Guest, Manager of the Direct Mail Dept., Alfred Allen Watts Co., Inc., New York, was recently elected National President of the Society of American Magicians at this organization's annual convention held in Boston.

Link-Belt Co. has announced appointment of Robert W. Suman as Chief Engineer of the new Colmar, Pa., plant, and Norman Virkler to succeed Suman as Chief Engineer for the Philadelphia plant. The Colmar plant, north of Philadelphia, is now under construction and is scheduled to begin manufacturing operations later this year. Suman joined Link-Belt in 1934 on graduation from Armour Institute of Technology (now part of Illinois Institute of Technology). Virkler has been associated with the Link-Belt Philadelphia plant almost 35 years, joining the company in 1917.

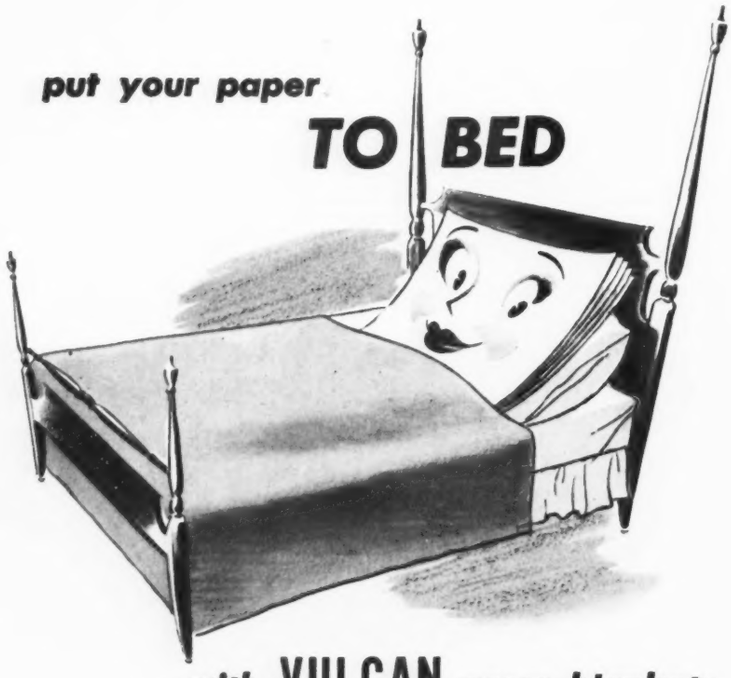
Robert W. Suman

Norman Virkler

Joseph Cavanaugh, Asst. to the Vice Pres. of J. M. Huber Corp.'s Ink Div., has been named Chief of the Printing Inks Section of the Chemical Div. of the National Production Authority, it was announced recently by J. S. Hart, Huber Vice Pres. Cavanagh received his chemical engineering degree from Fordham University in 1942, and was vice president of the Cavanagh Chemical Co. before joining Huber. He was successively manager of the Huber Rotogravure Laboratory, assistant purchasing agent and purchasing agent of the Ink Division before this present appointment.

F. Nelson Thoren has joined the sales staff of Davis, Delaney, Inc., Printers, New York, N. Y., according to an announcement by the company. Thoren was formerly associated with William E. Rudge's Sons.

Hiram Akita, for the past seven years chief inspector for the Mohr Lino-Saw Co., has been named mechanical superintendent of the company's manufacturing department. Mr. Akita, whose mechanical training was obtained at the Illinois Institute of Technology, replaces Norman Ring in this position.



with VULCAN press blankets

There'll be no nightmare in the pressroom when your presses roll smoothly with VULCAN press packing on the cylinders.

No other manufacturer in the world offers such a wide variety of impression cylinder packing. There is a VULCAN combination for every type of press — old or new — and every pressroom operating condition.

Get the benefit of the years of VULCAN research that have developed new aids to finer newspaper reproduction of black-and-white and color.

For the ultimate in faithful reproduction of solids, halftones and type areas, try the famous VULCAN #67 Non-Felt Blanket.

VULCAN RUBBER PRODUCTS, INC.

58th Street and First Avenue • Brooklyn 20, N. Y.

Pacific Coast Representative: The California Ink Co., Inc. *Canadian Representative:* Sears Limited, Toronto

NEW USED AND REMANUFACTURED EQUIPMENT

Model 00 Cleveland Folder — With Air Wheel Continuous Feeder. 9 Fold Plates. Sheet Size 4 x 6 to 22 x 28.
Model F Elrod — 36 pt. Cap. (Less than 3 years old.)
27 x 41 Miller Major — 4 track
20 x 26 Miller Simplex
14 x 20 Kelly Clipper
2/0 Miehle Auto. — 41 x 55
No. 3 Miehle Auto. — 32 x 45
Model V36 Miehle Vertical
12 x 18 Little Giant — Like New
Swingback Feeder for Pony Miehle
12 x 18 C&P Craftsman Auto. (Latest Style)
10 x 15 Kluge Unit
17 x 22 Harris LSB
22 x 34 Harris S5L
38 x 54 Miehle Offset
44 x 64 Harris LF
Christensen Gang Stitcher
Wright Multiple Drill-5 Heads
Goss Model 69E Stereo Caster
Model 5 Lino. — 1 Magazine
Model 8 Lino. — 3 Magazines
Model C Inter. — 3 Magazines

an open door to the BEST

The M. L. Abrams Co.
NEW & "REMANUFACTURED" EQUIPMENT

1729 Superior Ave., Cleveland 14, O.

Only the experienced are qualified to pass judgment

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See for yourself

WHY BEVERIDGE MATS ARE BEST

Beveridge Dry Mats

NEW PRODUCTS DIVISION
THE BEVERIDGE PAPER CO. Indianapolis 4, Ind.

THE MONOMELT COMPANY

THE MONOMELT
THE PLANE-O-PLATE
THE HYDRO-CASTER
MONOMELT POWER SHEARS
MONOMELT MOLDING PRESSES
PLASTIC PLATE CURVER
VINYLITE AND ELECTROTYPERS SUPPLIES
BAKELITE MATRIX
(Processed by Monomelt)

1611 N. E. Polk St.
Minneapolis, Minn.

PIONEERS

Rotogravure Equipment and Supplies

When you think of quality and know-how, think of Pioneers in Rotogravure Printing Equipment:

STANDARD PROCESS CORPORATION
2704 West Roscoe Street
CHICAGO, ILL.

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From 1928 to 1952

Printing cylinders—manufactured complete; semi-steel, centrifugally cast steel, etc.; dynamically, statically balanced; copper plated, turned, ground and polished.

Quality copper plating and repairing cylinders.

The best in cylinder grinding and polishing machines; special heads (patent pending) — with precision controlled stone pressure and automatic feed.

Pioneer in sale of artificial abrasive Intaglio grinding and polishing stones—since 1931.

Doctor blade grinders, layon machines, etching trucks, laboratory presses, gravure presses, plating equipment, etc.

Pioneers as a Rotogravure House for the Gravure Printer

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STANDARD PROCESS CORPORATION
Manufacturing Gravure Equipment & Supplies
2704 W. Roscoe Street • Chicago 18, Ill.

RICHARDS'
"Electromatic"
Efficiency Plus

A HEAVY DUTY SAW
For Stereotypers — Electrotypers — Photo Engravers.
PRECISION GAUGES
Instant change to SAW-TRIM
J. A. RICHARDS CO.
Kalamazoo, Michigan

Ben Lane, President, has announced the addition of Frank DeWitt to the managerial staff of The Lane Press, offset and letterpress printers, Burlington, Vt. DeWitt comes to his new position from Commercial Controls Corp. where he was Director of Graphic Arts Research during the period of development and initial sales promotion of the Justowriter composing machine. Previous to his employment at Commercial Controls, Mr.

Frank DeWitt, well known in Graphic Arts industry, is now with The Lane Press, Burlington, Vt. in a managerial capacity.

DeWitt taught for 10 years at the Rochester Institute of Technology in the Publishing & Printing Department. He has written articles, lesson sheets, and instruction books on typesetting machines and composition and has given illustrated lectures on composing machines.

Ernest Payne Corp., New York, N. Y., distributors of new and rebuilt Graphic Arts equipment, announces appointment of Henry F. Melen as sales representative. Previously, he was production supervisor with the Louis De Jonge Paper Co., pressman-in-charge at the New York *World-Telegram*, Kluge representative in New York State and most recently, salesman with Western Newspaper Union. He is an active member of the International Pressmen's Union and the International Assoc. of Printing House Craftsmen. He makes his home in Staten Island, N. Y.

Howard Knight, President of Livermore and Knight Co., Providence, R. I., has been elected Chairman of the Board. Succeeding his father as President is Richard B. Knight who has been with the company since 1938 after his graduation from Princeton University. In 1942 Richard B. Knight was elected Executive Vice Pres., and also took over active management of the advertising business of Livermore and Knight agency, changing its name to Knight and Gilbert, Inc. Also in 1942 he commenced service with the U. S. Navy. He returned to Providence in 1945, at which time the assets and good will of Knight and Gilbert were disposed of so that he might devote his attention to the Livermore and Knight Co. Mr. Knight is also a Vice President of the Bank Litho Co., a Director of Phoenix National Bank of Providence, and the National Association of Photo-Lithographers.

Literature is available describing any of the six Miller Automatic Cylinder Presses. Write today giving the size of press in which you are interested.

Miller Printing
Machinery Co.
1103 Reedsdale St.
Pittsburgh 12, Pa.

F. V. Krummrich, Export Sales Mgr. for Fairchild Camera and Instrument Corp., flew to Europe July 1 to expand the Scan-a-graver market through France, Spain, Portugal, Belgium, Netherlands, Denmark, Germany, Switzerland, Italy, Israel, Greece, Finland, Norway and Sweden.

Linotype Parts Co., Inc., announces additional readjustment change in territory coverage by sales personnel. John Busey, in addition to the territory previously announced, will cover the states of Delaware and Maryland, with the exception of suburban Washington towns. A previous announcement indicated that Mr. Busey would cover all of New York State. However, it is announced that this does not include New York, N. Y., which is still to be covered by Joseph F. Burbige.

Colors, Slits & Rewinds Paper

On the job conversion makes it possible to reduce inventory — Save upcharges for colors and penalties for narrow rolls.
Solves the problem of obtaining groundwood and newsprint in colors.

PUGLISI-DUTRO, INC.
1206 Maple Avenue
Los Angeles 15, Calif.

MAIL COUPON FOR INFORMATION
Please send further information on the DUTRO COLORVERTER

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for safe, efficient
STATIC
elimination

the Simco
MIDGET
is best of all—and least expensive!

the SIMCO company
9th and Master Streets
Philadelphia 22, Penna.

'Surface'

TYPE METAL REMELTING FURNACES

Invest in a 'Surface' Gas-Fired Type Remelting Furnace for rapid, on-time, melting requirements.

A 'Surface' Type Metal Remelting Furnace equipped with Atmosphere Burner, bottom outlet and hood. Available in capacities up to 5000 lbs.

B Same furnace as A without hood.

C 'Surface' Type Metal Remelting Furnace with Pressure Burner. Standard models available with capacities up to 3200 lbs. of metal.

For further information write for LITERATURE GROUP TR-1

SURFACE COMBUSTION CORPORATION • TOLEDO 1, OHIO

"I like to read YOUR PAPER the type is so clear."

Such is the verdict of a rural subscriber of seventy, paying at the cashier's window as her father did before her.

Mat performance is a big help in winning compliments like this. Rely on Certifieds —UNIFORMLY good.

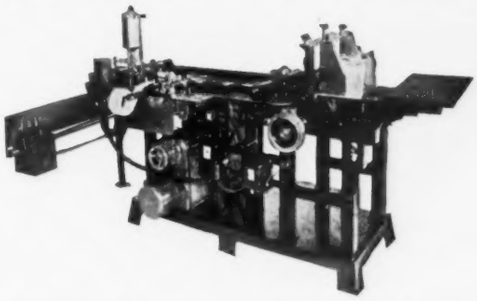
For dependable stereotyping, rely on Certified Mats

Certified DRY MATS

CERTIFIED DRY MAT CORPORATION, 9 Rockefeller Plaza, Dept. M, New York 20, N. Y.

103,000,000 PUBLICATIONS ARE MAILED MONTHLY BY

Cheshire Mailing Machines



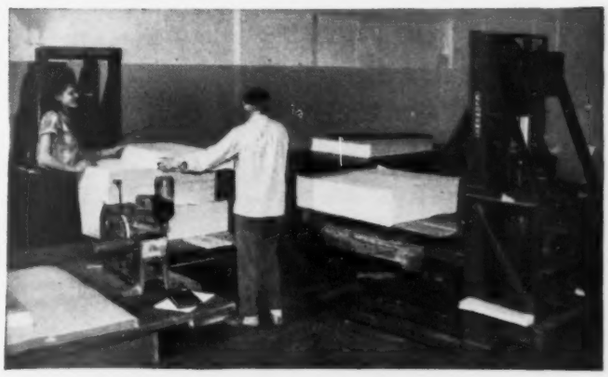
Automatically Cut and Attach Addressed Labels to Newspapers, Magazines, Pamphlets, Direct Mail, at High Speed and Low Cost!

Cheshire Machines have eliminated the bottlenecks in mailing rooms of leading publishers and printers for many years. They cut mailing time 'way down. Save the labor of many hands. Really make money for you. New, improved model is better than ever.

Let us survey your mailing needs—write!

Cheshire Mailing Machines, Inc.

1415-25 West Altgeld Street • Chicago 14, Illinois



Speed paper handling with

ECONOMY ELECTRIC LIFTERS

The arms of the Economy Electric Lifter hold the paper at any height with an automatic brake. Paper can be "inched" up with electric power as each lift is transferred to cutting or sorting table. This positive control makes handling of paper easy so that bindery girls can do the work that otherwise would require a man's strength. Being portable, these Economy Electric Lifters can be moved about to serve in any part of the plant.

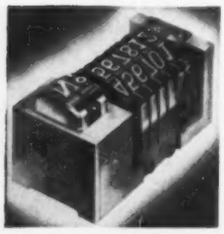
Economy Lifters are also very useful for handling skids or rolls of paper at loading platforms.

Write for complete specifications of this paper handling lifter. Our engineers can help with your particular problems.

ECONOMY ENGINEERING COMPANY

4501 West Lake Street, Chicago 24, Illinois

the all-purpose **ULTRA-FORCE TYPOGRAPH**



. . . the finest for PLATEN and FLATBED CYLINDER PRESSES. Precision mechanism, legible impressions, for high speed operation. For all forms and manifolds. From tickets, tags and labels to sales slips, checks, ledger sheets and all records. *Write for Catalog J.*

THREE QUARTERS OF A CENTURY'S SERVICE

WM. A. FORCE
A COMPANY INCORPORATED
216 NICHOLS AVENUE, BROOKLYN 8, N. Y.

The R & B
EXTENSION DELIVERIES
for MIEHLE, BABCOCK, PREMIER and other presses
•
AUTOMATIC PAPER LIFTS
•
Special purpose equipment for the Graphic Arts Industry
CONSULT US ON YOUR PARTICULAR PROBLEM

THE RATHBUN & BIRD COMPANY, INC.
DESIGNERS AND MANUFACTURERS • FOUNDED 1898
DEPT. PE 379 WEST BROADWAY NEW YORK 12, N. Y.

Joseph Maskin of the Miehle Printing Press & Mfg. Co., recently celebrated his 30th anniversary with the company. Maskin, a disabled veteran of World War I, has been employed since 1922 in various divisions of the Miehle Engineering Dept. Henri Peyrebrune, Vice Pres. in Charge of Engineering, pointed out that Maskin has participated in the development program in improving the Miehle Vertical and developing the Miehle Horizontal Presses.

E. F. Bovermann has been promoted to Sales Supervisor of Printing Accessories for Minnesota Mining & Mfg. Co. He will be in charge of the Midwestern Division including Cleveland, Cincinnati, Detroit, Chicago, St. Louis, Dallas and St. Paul, with headquarters in Chicago. Bovermann joined MMM in 1949 and has been a member of the firm's Printing Accessories sales staff. Announcement of his promotion was made by E. J. Kane, Sales Mgr., Printing Accessories, Reflective Products Div.

E. A. Dominik, formerly vice president of Central Typesetting & Electrotyping Co., Div. of W. F. Hall Printing Co., Chicago, has joined the Lake Shore Electrotype Div., Electrographic Corporation, Chicago, as Manager of Plant Operations. Dominik spent the past 29 years with the Hall organization in sales, management and administrative capacities. He has served as vice chairman of the Chicago Photoengravers Assoc. and president of the Chicago Employing Electrotypers Assoc.

CHECK ON YOUR SUPPLY OF BOOTH'S ZINK CUT CEMENT

We suggest that the hundreds of users of BOOTH'S ZINK CUT CEMENT check on their supply right now. If you are low, get your order in now for this outstanding cut cement for mounting cuts and solidifying type elements for standing ads. If you have never used this famous cut cement, try it. You'll find it mounts cuts quicker and holds them tighter . . . in use all over the country by leading plants.

Prices: 75c per tube, $6.00 per dozen in the United States.

E. A. BOOTH RUBBER CO.
2855 Scarboro Road
Cleveland Heights, Ohio

Revolutionary Page Makeup

The 118 year old Galena (Ill.) *Daily Gazette*, published five days each week, has been purchased by Publisher Peter Miller of the La Salle (Ill.) *Daily News-Tribune*. His brother, Frederick C. Miller, has been appointed general manager. The appearance of the paper has been changed radically. In an editorial announcement it is stated: "Typographers have told us what they believe the Newspaper of Tomorrow will look like. We are going to try to print that kind of a newspaper today . . . The use of this type in these wide columns is an experiment used here for the first time in any daily newspaper. For many years, experts on typographic design and layout have predicted that the newspaper of tomorrow will be set in this style. So far, no newspaper has dared to try this experiment. We are not afraid to try, though."

The front page makeup of the *Daily Gazette* for May 26 consisted of a full length column of pictures 33½ picas wide. The three remaining columns set in type are 16½ picas wide, with 1 pica

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BEST
on ALBANY

There's many a press that's been reared on ALBANY Grease and Oils. That's why such equipment purrs along at high speed giving freedom from all troubles caused by improper lubricants.

For new equipment . . . for older equipment . . . try the following: ALBANY GREASE NO. 3 for presses equipped with grease cups . . . ALBANY SOFT PRESSURE GREASE for pressure fittings and for oil lubricated presses, ALBANY VISCOUS PRESS OIL. For gears, cams, chain drive—all types of presses, use ALBANY GEAR LUBRICANT NO. 93.

You'll find your presses doing their utmost on a steady diet of ALBANY LUBRICANTS.

Write today for Service Bulletin No. 10.

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Mfrs. of Albany Lubricating Products
LINDEN, NEW JERSEY

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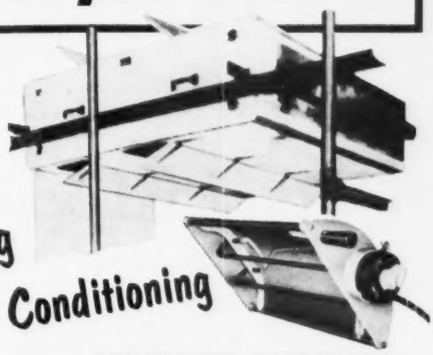

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...Sheet Conditioning
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- INFRA RED AND HOT AIR OVENS
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ONLY the right type of heater will do the right job. We know what to recommend and can furnish the exact type of heater required for *your* particular purpose.

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LASTING IMPRESSIONS

because...

Wood Dry Mats
assure clean-cut casting for better printing results.

WOOD FLONG CORPORATION
HOOSICK FALLS, N. Y.
NEW YORK CITY OFFICE:
551 FIFTH AVENUE, NEW YORK 17, N. Y.

Tie Newspapers . . . Magazines

The SAXMAYER Way!

All SR Models with or without packer use jute, sisal or cotton twine ... makes tight secure tie with one wrap and non-slip bow knot ... ties various size stacked or rolled bundles without adjustment... Model SR1C illustrated especially adapted to conveyor systems for full AUTOMATIC operation . . . Small motor and hand operated models for tying single papers for home delivery available . . . Machines fully guaranteed . . . over 30 models to choose from.

LITERATURE ON REQUEST

NATIONAL BUNDLE TYER CO.
BLISSFIELD, MICHIGAN

PERMANENT* CURE FOR STATIC TROUBLES

Ionotrons — an application of ATOMIC ENERGY

The Ionotron Static Eliminator® is very different from other static devices. It uses no electricity, gas, or tinsel — nothing touches the work. It costs nothing to use — its radioactive source of alpha radiation continuously drains-off static charges through the air in the trouble zone. Hundreds of installations have proved it works and is safe. Get details in booklet PE-8. *U. S. Radium Corp., 535 Pearl St., New York 7.*

IONOTRON *Static* ELIMINATOR

*Strictly speaking, nothing in the world is permanent. But since the effectiveness of Ionotrons lasts for hundreds of years, we thought this to be "permanent" in relation to the life of any printing equipment.

Investigate . . .

The NOLAN STEREOSAW

Check these features: Extra large table 28x36" . . . Powerful 2 HP motor . . . Double V-belt drive . . . Heavy base, no vibration . . . Straight edge and side gauge . . . positive elevating mechanism . . . 10" dia. saw blade . . . Rugged ball bearing saw mount . . . Four-wheel chip buggy. Write for prices.

NOLAN CORP.

ROME, NEW YORK

Builders of Quality Printing Machinery

white space between columns (no rule).

Most of the body composition in page 1 is approx. a 10 pt. roman face. Some of the news matter inside is set in 8 pt. Regal No. 2 leaded. The inside pages all are made up with rules between the columns.

It is intended to publish news halftones in every issue.

It is to be assumed that since the La Salle (Ill.) *News-Tribune* has won the Francis Wayland Ayer Trophy Cup two years in a row, that the new ownership likewise will strive to perfect the appearance of the Galena *Daily Gazette* even though it be a revolutionary one. In any event, the paper is easy to read and we believe non-printer readers will go for the large type wide measure column idea together with news halftones.

NPA

Printing and Publishing Division

Problems Affecting U. S. Newsprint Production

At a recently held special conference, newsprint manufacturers told officials of the National Production Authority that high investment and production costs and relatively low returns are the principal problems affecting further expansion of newsprint production in the United States.

In comments on comparative costs, prices, and profit margins, members of the group told NPA that:

1. Certain machines formerly used in the manufacture of newsprint are now being used to produce other grades of paper because such grades are more profitable than newsprint.

2. Pound for pound, the return on newsprint is less than on other grades of paper.

3. A newly built mill is at a substantial disadvantage in competing with a mill built some years ago because of present investment costs.

4. The investment return on newsprint production is so low that capital investment can do better in other fields.

5. In some areas where pulp wood is available, power costs are uneconomically high.

Zinc Order Revoked

Removal of all inventory controls over zinc by revocation of Order M-9 was announced recently by Erwin Vogelsang, Director, Tin, Lead and Zinc Div., National Production Authority. Vogelsang explained that when zinc allocations were suspended on May 15 last, it was believed necessary to maintain inventory controls over slab zinc because (1) of the closeness of balance between supply and requirements and (2) the uneven supply as among various grades. To ease the transition from full controls, the industry was given permission to accumulate a 60 day inventory, with NPA maintaining authority to iron out any inequities.

The zinc supply has continued to improve, Vogelsang said, and sufficient inventories now have been accumulated to carry manufacturers through the period of readjustment. Meanwhile the steel strike has reduced the demand for zinc which has speeded inventory accumulation.

BOOKLET FOLDER & TAG STRINGING
tags
DIE CUT STRING TAGS
20 STOCK COLORS
MANY GRADES & SIZES
& OVERSIZE DIMENSIONS
Plain or Printed Tags; made single, gangs, fanfold; holes, slots, perforations, brass eyelets, numbers.
BUTTON TAG GANGS
PATCH-EYELET RE-INFORCING
DIE-CUT TAGS
Printed in colors, strung, ready to use.
FANFOLD TAGS
WIRES STRINGS
STRINGING
We punch-string your own Booklets, Cards, Tickets, Tags, Folders. Tied in 100's and boxed.
Tags made from your own stock, complete with wires, strings, etc.
A Thousand or a Million
METAL FASTENERS
INVOICE
TAG ENVELOPES RE-INFORCED
STANDARD TAG CO.
ESTABLISHED 1925
TAG MAKERS & STRINGERS
65 DUANE STREET
NEW YORK 7, N. Y.

THE DOYLE INFRARED DRYER
Patented
for all types of printing machinery
THE DOYLE VACUUM SHEET CLEANER
Patented
Removes dirt, dust, lint and dry spray from paper while printing
The J. E. Doyle Co., 1220 West 6th St., Cleveland 13, Ohio

SALE OF PLANTS • APPRAISALS • SURVEYS
ROBT. ROYDEN GREER
Printing Engineer
5201 WILSHIRE BLVD., LOS ANGELES 36
PLANT LAYOUT • LABOR-SAVING RECOMMENDATIONS

VANDERCOOK PRE-PRESS EQUIPMENT

Manufactured by the largest producer of proof presses and other pre-press equipment for letterpress, offset and gravure. *Write for a catalog.*

VANDERCOOK & SONS, INC.
900 North Kilpatrick Avenue • Chicago 51, Illinois

VANDERCOOK PRE-PRESS ...CUTS COSTS!

END STATIC TROUBLES WITH *PROVED* STATIC CONTROLS

TAKK HIGH SPEED STATIC CONTROLS

THE JOHN HEWSON COMPANY
General Sales Agents
106 Water Street, New York 5, N. Y.

CLASSIFIED ADVERTISING

ALL CLASSIFICATIONS

$.75 per line 1 9/16" wide. Minimum ad 5 lines, 29 characters per line. Cash with order.

CLOSING DATE—15th of Month preceding Date of Issue

We will forward all mail addressed to Box Numbers. When answering Box Numbered ads, address as follows: Box Number . . . PRINTING EQUIPMENT Engineer, 1276 West 3rd Street, Cleveland 13, Ohio.

FOR SALE

No. 1 Kelly with dry spray gun, serial No. 223. Top condition. 220 v. 60 c, 5 phase.—Model MMM Semi-Cylindrical Formo Scorch mat scorcher in use only 3 months, 220 volts, 5,000 watts, 60 cycles, 3 phase.—Model 5 Linotype Machine in good condition is running on teletype daily, 110 v, 60 c, 1 phase. **Ottawa Herald, Ottawa, Kansas.**

FOR SALE

Cottrell, four color sheet-fed rotary (McKee type). Serial No. 11205. Dexter pile feeder. Maximum sheet size 47 x 32. Used on highest quality color printing. Complete with all electrical equipment and wax offset spray. Can be inspected by appointment or make best offer.

The Beck Engraving Co.
7th and Sansom Streets
Philadelphia 6, Pa.

DUPLEX
5 UNIT PRESS
Plus Color Cylinder

Length cut-off 22¾" Double folder, rubber rollers. 125 HP and 60 HP motors, jog motors, control panels, spare armatures, extra gears, etc. Press in excellent operating condition. Available immediately. 2 C.H. conveyors, Pony Autoplate, 8700 Goss Metal Furnace, 9 G.E. immersion units, attached roll re-winder, 41 steel chases.

Lancaster Newspapers, Inc.
Lancaster, Pa.
Tel. 5251—Mr. Detwiler

STAR CUT CEMENT

Famous since 1936, hundreds of users testify to the effectiveness of STAR CUT CEMENT. Do a better job of mounting photoengravings, stereotypes and electrotypes by using STAR CUT CEMENT. Composing, stereotype, electrotype and photoengraving executives must see that the mounting job is done right. They know the value of a cement that permits mounting cuts quickly and holds them in place. Be sure to use the PROVED cement—STAR CUT CEMENT.
65c per tube—$5.50 per doz.
$5.00 per doz. in 2 doz. lots.
$4.50 per doz. in gross lots.

STAR CEMENT COMPANY
45 Malone Avenue
Belleville 9, N. J.

FOR SALE

L & M sheet-fed gravure press. Dexter pile feeder. Serial No. 157. Maximum sheet size 25 x 38. Complete with all electrical equipment. Has been used on highest quality monotone gravure work. Can be inspected by appointment or make best offer.

The Beck Engraving Co.
7th and Sansom Streets
Philadelphia 6, Pa.

FOR SALE

Master Etching Machine stainless steel; Goss flat router direct motor operation; Chemco stripping table; Master water cooler; Goss flat shaver with hold down roller. Reply Box 481, PRINTING EQUIPMENT Engineer.

WEB DRYING APPARATUS
for ROTOGRAVURE · WEB-OFFSET · ANALINE LETTERPRESS
B. OFFEN & CO.
168 N. Michigan Ave. Chicago 1, Illinois

MEN WANTED • POSITIONS OPEN

Sales Executive - Machinery Mfr. ..... $10,000.00 - $12,000.00
Salesman - Equipment ..... OPEN
Design Engineers ..... OPEN

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Dept. PE-8, 307 E. 4th Street, Cincinnati 2, Ohio
Specialists in Placing Key Personnel in the Graphic Arts Industry

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NEW BUILDINGS · MODERNIZATION
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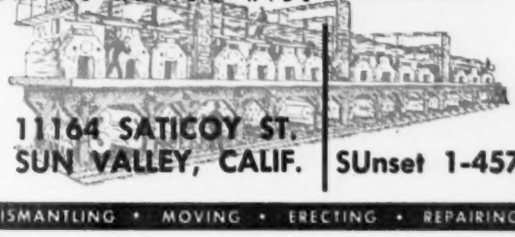
WOOD PONY AUTOPLATE 22¾"
MONOTYPE GIANT CASTER
MASTER STAINLESS STEEL ETCHER
•
JOHN GRIFFITHS CO., INC.
11 West 42nd Street New York 36, N. Y.

LOYAL S. DIXON CO.
SERVICE NATION WIDE
NEWSPAPER PRESS ERECTORS



11164 SATICOY ST.
SUN VALLEY, CALIF. | **SUnset 1-4575**
DISMANTLING · MOVING · ERECTING · REPAIRING

Solvents and Adhesives for Rubber Plates

By M. S. KANTROWITZ, Chairman, Research Committee, Washington (D.C.) Club of Printing House Craftsmen.

THE requirements for a good ink solvent for rubber plates are practically the same as those for an ideal ink solvent. These requirements include the following: (1) Removal of the ink from the face of the plate; (2) Fast and complete evaporation without leaving residue; (3) No chemical or physical reaction with materials from which the plates are made or the adhesive used to attach the plate to the press; (4) Non-flammability; and (5) Non-toxicity. Unfortunately, no such perfect solvent has been discovered. Therefore, it is found necessary to depend on materials which meet as many of these requirements as possible.

In searching for a better ink solvent for rubber plates, the effect of solvent upon the adhesive employed in cementing the plate to the press must be given prime consideration. Rubber plates are fastened to a thin metal sheet by means of a paper tape coated on both sides with pressure-sensitive adhesive. The thin metal sheet is securely attached to the press cylinder. The solvents used in washing up these plates work their way under the rubber plate edges and dissolve the adhesive backing material, causing the plate to loosen.

A moldable plastic film tape, commercially designated No. 471, may be employed to seal the edges of the plate and prevent the solvent from penetrating under the edges with subsequent loosening of the plate. It is known to stand up well over 500,000 impressions when the plates are cleaned with Varsol. This plastic tape and its adhesive backing, neither of which are dissolved or softened by ink solvents, completely seals the edges of the rubber plates, preventing penetration of solvent. It is furnished in rolls in ½-inch width and is so placed around the plate that ¼-inch adheres to the edge of the plate and ¼-inch adheres to the paper tape coated on both sides with adhesive and commercially designated No. 400. Care is taken to press the tape well onto the edge of the plate.

Mid-Year Calendar

Fuchs & Lang Mfg. Co., Div. of Sun Chemical Corp., has issued a mid-year calendar in which is demonstrated how two colors may be used to produce a three-color effect. Two different colors are shown on each page; the darker of the two carries the typography, while the lighter is suitable for ornamental or background effect. A chart at the bottom of each calendar page indicates the range of effects obtainable with the two colors as solids or tints, either used singly or in combination. Halftone subjects have been used throughout the calendar to illustrate each two-color combination. According to E. G. Schreibeis, General Mgr., the calendars are available through F&L representatives.

Firms Consolidate

William E. Rudge's Sons, New York, the printing division of Geffen, Dunn & Co., producers of stockholders reports and other corporation literature, has been consolidated with the printing division of the Blue List Publishing Co., 130 Cedar St., New York. Roald A. Morton will assume executive direction of the combined printing divisions. He has been a partner of Geffen, Dunn & Co. since its founding in 1941, and has served as executive partner in charge of the Blue List Publishing Co. since 1941 and the Rolmor Press since 1951. He will be assisted by Ronald H. Cleveland, also a partner of the Geffen, Dunn firm.

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WILLIAM L. OSBORN, Eastern Manager, 1712 Grand Central Terminal, New York 17, N. Y. Phone MUrray Hill 6-5980.
MELBURN O. SIMMONS, Mid-West Manager, 333 North Michigan Ave., Chicago 11, Ill. Phone DEarborn 2-6467.
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Hammond Glider TRIMOSAW

"THE SAW WITH THE BALL BEARING TABLE"

ALSO 2 OTHER TRIMOSAWS; THE MERCURY AND THE BEN FRANKLIN

Hammond Machinery Builders INC.

1604 DOUGLAS AVENUE • KALAMAZOO, MICHIGAN

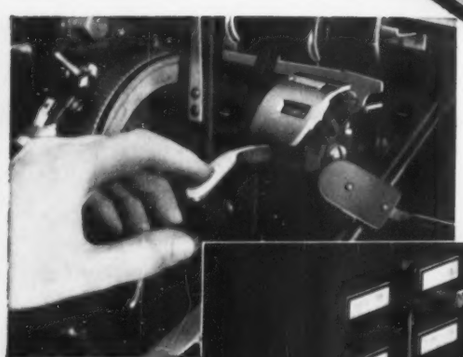
How to get MORE galleys out of ad alleys

SETTING complex ad copy calls for *fast, versatile* line composing machines. That's why you will find profit-making INTERTYPE® MIXERS in so many ad alleys. These efficient machines produce mixed composition for grocery, drug and other hard-to-do publication advertisements *at the same speed* as run-of-the-hook straight matter.

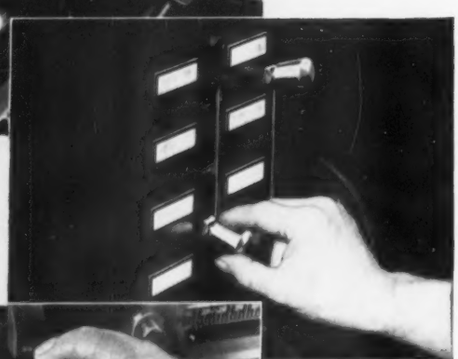
HERE'S WHY. Intertype Mixer machines distribute mixed matrices continuously. *One* distributor box automatically directs mats back to their proper magazines. And you can mix as many as SIX FACES in the same line with the *Finger-Flip Mixer Shift.* You change magazine positions with the *No-Turn Autoshift.* You can quad and center automatically with the *Intertype Autospacer.*

WHY SWING a lot of magazines, cut in slugs, waste time and motion when setting complex copy? Get more galleys out of *your* ad alley with a versatile Intertype Mixer.

The text of this ad is Century Schoolbook



FINGER-FLIP MIXER SHIFT



NO-TURN AUTOSHIFT

AUTOSPACER

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LOS ANGELES 15 • NEW ORLEANS 10 • BOSTON 10

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Look to Progressive Intertype